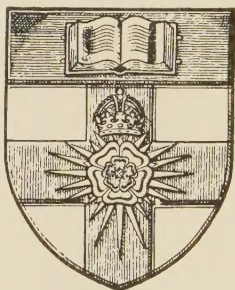
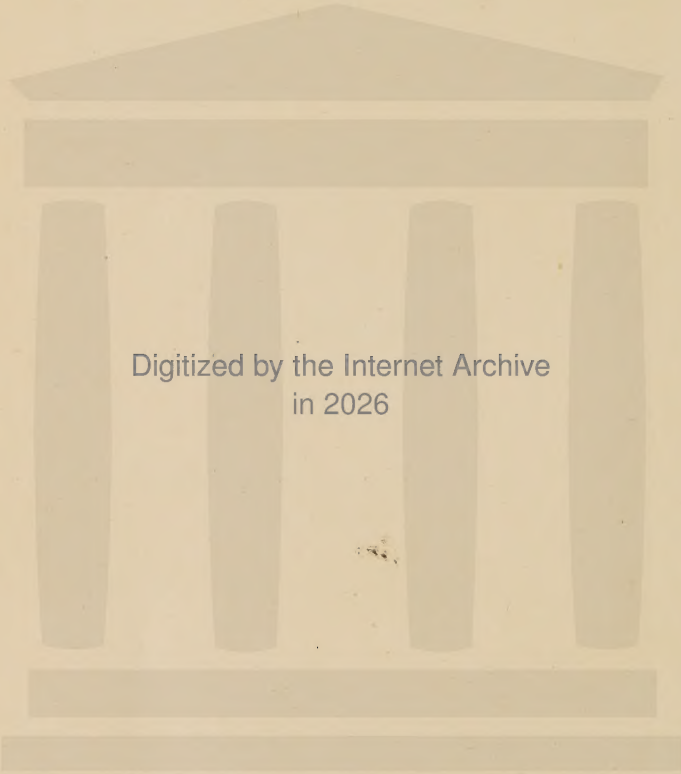


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THE INSTITUTION OF SURVEYORS.

TRANSACTIONS.

VOL. III.

SESSION 1870-71.

LONDON:

PUBLISHED AT THE ROOMS OF THE INSTITUTION,
12, GREAT GEORGE STREET, WESTMINSTER, S.W.

[ENTERED AT STATIONERS' HALL.]

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THIS Institution does not, as a body, hold itself responsible for statements made or opinions expressed, either in the Papers read or in the discussions which have occurred, at the Meetings.

The Institution of Surveyors,
12, GREAT GEORGE STREET, WESTMINSTER, S.W.

OFFICERS, 1870-71.

COUNCIL.

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Vice-Presidents.

JEREMIAH MATHEWS

THOMAS HUSKINSON

EDWARD NORTON CLIFTON

JOHN OAKLEY

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JOHN CLUTTON

Treasurer.

ROBERT DRUMMOND

Honorary Secretary.

JOHN WORNHAM PENFOLD, 17, Parliament Street, S.W.

THIS COUNCIL WILL CONTINUE UNTIL MAY 1871.

The Institution of Surveyors

Is established—

1. To secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a Surveyor, viz.—the art of determining the value of all descriptions of landed and house property, and of the various interests therein; the practice of managing and developing estates; and the science of ad-measuring and delineating the physical features of the earth.
2. To promote the general interests of the profession, and to maintain and extend its usefulness for the public advantage.

THE INSTITUTION consists of three classes, viz.—MEMBERS, ASSOCIATES, and HONORARY MEMBERS, with a class of STUDENTS attached.

A MEMBER must be more than twenty-five years of age, and have acquired a practical knowledge of surveying in one or other of its branches as above defined, and so practised on his own account for more than five years; or be a member of a firm of surveyors established upwards of ten years, or in partnership with a surveyor of ten years' standing. Every Member is eligible for election on the Council, for election or appointment to all offices of the Institution, and entitled to all its rights and privileges.

An ASSOCIATE must be more than twenty-one years of age, not necessarily a surveyor by profession, but his pursuits must be such as to qualify him to concur with surveyors in the advancement of professional knowledge. Associates are not eligible for the offices of President or Vice-President, but are eligible for election on the Council or for election or appointment to other offices of the Institution; they have

access to the Library, subject to the regulations of the Council, and are entitled to vote and take part in the affairs of the Institution at all Annual, Ordinary, and Special General Meetings of Members and Associates.

AN HONORARY MEMBER must be a person who, either by reason of his position or his eminence in science and experience, may be enabled to render assistance in promoting the objects of the Institution, but who is not engaged in practice as a surveyor in Great Britain or Ireland. He has the privilege of being present and taking part at all Ordinary General Meetings, and of access to the Library, but no right of voting, discussing, or otherwise interfering in the affairs of the Institution; nor is he called on to contribute to its funds.

STUDENTS, not under eighteen years of age, may be admitted by the Council on the recommendation (according to a form) of four Members and two Associates, or of the Member or Associate to whom they are or have been articled, and they may remain Students of the Institution at and during the pleasure of the Council, until they attain the age of twenty-one years, when they shall cease to be Students.

The Council may accord to Students such privileges, subject to such terms, regulations, and restrictions, as they shall from time to time prescribe.

Any person desirous of being admitted into the Institution (excepting to the class of Students) must be proposed and recommended according to a form, in which the full name, place of business (if any), usual residence, and qualifications of the candidate must be distinctly specified. This form must be subscribed by him, and signed by at least six Members or four Members and two Associates, certifying a personal knowledge of the candidate.

The proposal so made, being delivered to the Secretary, will be submitted to the Council, who, on approving the qualifications, will determine the class for which the candidate is to be presented for ballot at an Ordinary General Meeting of Members and Associates.

The following are the rates of contribution to the funds :—

	Annual Subscription.			Admission Fee.		
	£	s.	d.	£	s.	d.
<i>Student</i> . . .	1	1	0	—		
<i>Associate</i> . . .	2	2	0	3	3	0
<i>Member</i> . . .	3	3	0	5	5	0

An Associate may compound for his annual subscription for twenty guineas, and a Member for thirty guineas.

With the view of forming a Library and Collection, all Members and Associates are expected, within twelve months after their election, to deliver to the Council an original Paper on some subject connected with the profession, or to make a donation to the Library or Collection.

The affairs of the Institution are under the management of a Council which is elected annually, consisting of a President, four Vice-Presidents, twelve Members, and two Associates. Besides the above, the past Presidents, and the President or Chairman of any local Association in alliance with this Institution, are Members of the Council *ex-officio*.

The Session of the Institution commences annually on the second Monday in November, and continues to the end of May. The Ordinary General Meetings are held on every alternate Monday during the Session. At these Meetings original communications are read on some professional subject, and their merits fully and freely discussed. Every Member and Associate has the privilege of introducing one visitor to these Meetings. Members and Associates are entitled to a copy of any printed publication issued by the Institution after their admission.

THE OPENING ADDRESS,
BY
RICHARD HALL, PRESIDENT,
AT THE ORDINARY GENERAL MEETING OF
THE INSTITUTION OF SURVEYORS,
NOVEMBER 14TH, 1870.

GENTLEMEN,

It is with some diffidence that I address you from a chair, occupied, hitherto, by one so well qualified by his eminence and attainments for the office of President; it, nevertheless, affords me special gratification to find myself in the distinguished position to which you have elected me, now that our Institution has taken its place among the recognized societies as fairly representing the profession.

I need hardly say that it will be my endeavour (as far as my powers and opportunities go) to discharge the duties of the office in a way conducive to the best interests of the Institution, and, in doing this, I feel I may confidently rely on your kind indulgence and support.

It must be a source of the utmost satisfaction to those of our Members who associated themselves in working out the formation of the Society, to find, that notwithstanding discouragements and prognostications of failure, we have steadily advanced towards a well-assured success, and are now entering on our third Session with every prospect of growing usefulness and importance.

We have received a very considerable accession to our ranks since the date of the last opening Address, and I trust that, before the close of the present Session, our numbers may be augmented by the enrolment of many fresh names.

A second volume, containing much useful information, has been added to our *Transactions*, and I am glad to be able to state that we are already promised several interesting communications for the present Session ; among others, the following subjects will probably be brought forward for discussion, viz. :—

The Rating of Railways ;

The Valuation of Annuities and Reversions ;

Tithe Commutations ;

The Proposal for Levying a Proportion of the Local Rates and Taxes on the Owner as well as on the Occupier ;

Road Making and other Practical Subjects ;

And a Paper on

The Results of Sewage Farming for the Past Year.

It is thus evident that we have every prospect of a Session as interesting and useful as those which have preceded it.

The votes and proceedings of both Houses of Parliament are regularly supplied to the Institution during the Parliamentary Session ; and the Secretary is empowered to call a meeting of the Council if any bill be brought forward affecting the management or sale of land and buildings, or if any other proceedings of interest to the profession take place in either House. The report and evidence from the Select Committee of the House of Commons on Local Taxation, printed in July last, is of great public importance, and, as I have mentioned, a discussion is proposed to be taken thereon, for which I hope Members will prepare themselves.

With the exception of the Irish Land Act, very few measures of general professional interest received the Royal assent during the past Session, several bills having been withdrawn under its pressure. Although this measure

is confined exclusively to Ireland, I trust you will not think it out of place if I endeavour to give a general sketch of its provisions, affecting as they do, so considerably, the relation of landlord and tenant in that country, and in carrying out which it is highly probable that some at least of our Members may be engaged, and especially as the passing of this Act may possibly lead to the proposal of some legislative measure on the subject for this country.

The Act is divided into five parts: the first relates to compensation to tenants; the second to the sale of land to tenants; the third to advances by, and the powers of, the Commissioners of Public Works; the fourth deals with the legal proceedings and with notices to quit; and the fifth and last, with various details in the working of the measure.

The 1st and 2nd sections legalize the Ulster tenant right and all customs of a similar nature, but leave it to the discretion of the tenant under these customs to claim, with the consent of the Court, compensation under any other section of the Act, the occupation, however, thereby ceasing for the future to be subject to such customs.

Tenants not claiming under these customs, and whose tenancies have been created since the passing of the Act, are, by the 3rd section, entitled to claim compensation if they are disturbed by the act of the landlord, such compensation to be determined by the Court, and paid by the landlord, and not to exceed the following scale, viz.:—

When the rateable value is £10 or under, a sum not exceeding 7 years' rent.

Above £10	and not exceeding	£30	-	5	years.
-----------	-------------------	-----	---	---	--------

„	30	„	40	-	4	„
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„	40	„	50	-	3	„
---	----	---	----	---	---	---

„	50	„	100	-	2	„
---	----	---	-----	---	---	---

„	100	a sum not exceeding	-	1	„
---	-----	---------------------	---	---	---

In no case is the compensation to exceed the sum of £250.

Tenants, the annual value of whose farms is such as to place them under a higher class in this scale, can at their option claim in a lower class, provided that the amount of rent, to which the multiple is applied to calculate the compensation, is proportionately reduced. Unless this provision had been enacted, an occupation of the rental value of, say, £41 would only have entitled the tenant to claim 3 years' rent or £123; while, in the case of one rented at £40, the tenant could have claimed 4 years, or £160.

This scale of compensation is also extended to yearly tenancies existing at the time of the passing of the Act in cases in which the rateable value does not exceed £100.

Subletting, or subdividing the holding without consent, or letting in conacre after prohibition by the landlord (except for growing potatoes), disentitles the tenant to compensation for disturbance, and no tenant will be entitled to compensation who holds under a lease for 31 years, granted after the passing of the Act. Under another section (13), assignments without consent, in certain cases of tenancies existing at the time of the passing of the Act, bar the tenant's claim under this section.

Section 4 provides for compensation for improvements made by tenants who cannot, or do not, claim under the Ulster and other customs before alluded to; but they can claim for no improvements made before the passing of the Act, or 20 years before the claim is set up, other than the erection of permanent buildings, or reclamation of waste lands.

No tenant who has claimed for disturbance of his occupation, under the 3rd section, more than 4 years' rent in cases in which the rateable value exceeds £10, and more than 5 years in cases in which it is less than £10, is entitled to claim additional compensation for improvements,

other than for permanent buildings and the reclamation of waste land.

Compensation is not to be given for improvements made within 2 years of the passing of the Act, if prohibited by the landlord, and appearing to the Court to be injurious to the estate; or if made in accordance with an agreement for valuable consideration; or during the unexpired residue of the term of a lease granted before the passing of the Act; or if in contravention of such a lease, or of a contract made either before or after, provided the tenant can legally make such a contract.

In cases where a lease for 31 years is granted, the tenant, at its termination, can claim only for permanent buildings and reclamation of waste, and for unexhausted tillages and manures; and if any tenant quit a farm voluntarily, he is only entitled to compensation for improvements if his landlord refuses to allow him to dispose of his interest in such improvements to any incoming tenant.

The tenant under this section cannot be prohibited from making improvements which are for the benefit of the occupation; but he is forbidden to break up pasture; or cut timber which has not been planted by himself or his predecessor in title, except with the consent of the landlord.

The improvements to be compensated for, are defined in the 70th section to mean any works which add to the letting value of the occupation; and also tillages, manures, and the like farming works, the benefit of which remains unexhausted at the time of quitting the farm.

In the cases of improvements claimed for, which have been made before the passing of the Act, under a tenancy existing at the time of its passing, the Court can take into consideration in reduction of the claim, the time they have been enjoyed, the rent of the occupation, and any benefits received, in consideration, from the landlord.

Out of the compensation which may be awarded, either under this section or under the last, for disturbance, may be deducted all arrears of rent due to the landlord, and the value of any deterioration in the occupation, arising from the non-observance of an agreement, and also any taxes payable by the tenant.

A tenant is forbidden from entering into a contract that would have the effect of relieving the landlord from the penalty attached by the 3rd section to the disturbance of a tenancy, or from the payment for improvements provided for in the 4th, unless his occupation (not being subject to the Ulster or other customs), or the aggregate of his occupations in Ireland, be of the rateable value of not less than £50, in which case he can contract with his landlord not to claim under any section of the Act.

The 5th section provides, in cases where the Ulster and other customs do not exist, or where the tenant does not claim under them, that all improvements shall be presumed to have been made by the tenant or his predecessors, unless it be proved to the contrary; except in certain cases of improvements made before the passing of this Act, viz. :—

Where they have been made before the landlord became possessed of the holding.

Where the tenant holds under lease, or the improvements were made 20 years before the Act was passed.

Where the holding is assessed at more than £100, or the practice on the estate would tend to show that the landlord made, or assisted in making, the improvement; or where the Court shall judge that they were not made by the tenant.

The 6th section provides a machinery for the registration of the improvements made either by the landlord or tenant, which, if not objected to at the time, will be *primâ facie* evidence of the fact hereafter. This provision will prob-

ably be found very useful in preventing fraudulent claims, and avoiding some of the litigation which must be the result of the compensation clauses.

The 7th section deals with the cases of tenants who have not obtained compensation, either for disturbance of their tenancies or as claiming under the Ulster or other customs, in cases where it appears that they or their predecessors have paid money on coming into the occupation, with the implied consent of the landlord; provided that no opportunity afforded to the tenant for disposing of his interest has been neglected; and also provided that the money has not been paid during the existence of a lease made before the passing of the Act. The Court is instructed to see that the consideration, proved to have been paid for coming into the occupation, did not include any payment for improvements which may have been claimed, and paid for, under the 4th section of the Act, in order to protect the landlord from paying again for such improvements. Arrears of rent, &c., may be deducted out of the sum to be paid by the landlord, as in the other cases of compensation.

The 8th section secures to the tenant, not claiming under the Ulster or other customs, the right to the away-going crop, and the 9th and 10th lay down the limitation as to what disturbances in the tenancy by the landlord may be considered to entitle the tenant to compensation under the 3rd section. Ejectments for arrears of rent, for breach of covenant against assignment, for subletting, bankruptcy, or insolvency, are not to be so considered, nor is the resumption of a part of the holding (not exceeding one-twenty-fifth part) for the purpose of erecting cottages. The tenant who is ejected for arrears of rent or breach of covenant is to be treated as if he were quitting voluntarily.

The Court has power, in the case of a tenancy existing

at the time of the passing of the Act, to declare an ejectment for arrears of rent a disturbance to be compensated for, if the arrears of rent have not wholly accrued within the 3 previous years; and in cases where the rent is £15, or under, if they consider such rent to be an exorbitant one, and that the arrear has therefore arisen. In similar tenancies, evictions by the landlord in consequence of the exercise by the tenant of any right not necessary to the due cultivation of his holding, shall, with the approval of the Court, not be considered to be a disturbance entailing compensation; nor shall eviction, in consequence of the unreasonable refusal of the tenant to allow the landlord to enter on the holding for the purpose of mining, quarrying, cutting timber, making roads or drains, viewing the lands, or sporting.

Lands near towns, let at an accommodation rent and occupied by persons living in such towns, or grazing farms of the rateable value of not less than £50, or any grazing farms on which the tenant does not reside, are only entitled to claim compensation under the 4th, 5th, and 7th sections; and holdings, occupied by reason of the tenant being a hired servant, or in conacre, or for temporary pasturage, or as a cottage allotment, of not more than $\frac{1}{4}$ acre, cannot claim any compensation under the Act.

The tribunals intended to award compensation and settle disputes under the Act are the Civil Bill Court of the county in which the occupation is situate, or a Court of Arbitration. The judge or chairman of the former has power to take evidence on oath, and to compel the attendance of witnesses: he is to decide questions of fact without a jury, and may, with the consent of the parties, determine cases in Chamber. An appeal from his decision may be made to two Judges of Assize.

The Court of Arbitration is provided to consist of two arbitrators and an umpire, having the same powers as the

other Court, but unable to punish for contempt or enforce its awards, except through the interference of the Civil Bill Court. The award is, however, final, and cannot be appealed against.

The second part of the Act provides that, when the landlord agrees with the tenant for the sale of a farm to him, they shall apply to the Landed Estates Court, which, on receiving a deposit to cover costs from the landlord, is empowered, after making inquiries for the protection of all claimants on the estate, and for the tenant's interest, to carry out the transaction, if the terms are approved by the Civil Bill Court.

In the next division, the Commissioners of Public Works in Ireland are authorized to advance to tenants two-thirds of the purchase-money, if they are satisfied with the security; and they may also advance a similar proportion for the purchase, by tenants, of estates for sale in the Landed Estates Court. The loan is to be repayable by an annuity, at the rate of 5 per cent., extending over 35 years, secured on the property, and having priority over all other charges, except quit rents and charges incident to the tenure of the land. Whilst this rent-charge remains, the property purchased cannot be alienated, assigned, subdivided, or sublet, and any portion so treated shall become forfeited to the Board, to be devoted to public purposes. This condition will prevent the further subdivision of the property until the rent-charge expires, and, in this respect, is important.

If a landlord is unwilling to sell his estate in lots, the tenants of four-fifths in value of the whole may purchase, if they can find persons to buy the remainder; and the purchase-money can be advanced on similar terms.

The Board can also lend money to landlords to pay the compensation to tenants for improvements, and to reclaim waste land; and can also make advances of half the pur-

chase-money of such lands, on the joint security of vendor and purchaser. All these advances are to be repaid by similar annual rent-charges, extending over 35 years. These rent-charges can be redeemed on a scale set out in the schedule to the Act, calculated on the assumption of the original purchase-money being repaid by half-yearly instalments, in 35 years, with interest at $3\frac{1}{2}$ per cent.

The advances which are authorized by the Act to be made, are to be paid out of the Consolidated Fund, and are not to exceed the sum of £1,000,000.

The fourth and fifth parts of the Act relate to certain legal proceedings, to the Court, and to miscellaneous details. Notices to quit, which must be written or printed, and signed by the landlord or his agent, are subjected to a stamp duty of 2s. 6d., and they must be given 6 months before ejection, such period to terminate on the last gale day of the calendar year, in the absence of agreement to the contrary. A person not complying with this provision in serving a notice, is liable to a penalty of 40s. In the cases of occupations liable to the county cess, if the tenancy has been created after the passing of the Act, the tenant can deduct one-half of the payment out of his rent, and if the rent does not exceed £4, the whole of it.

I have endeavoured, thus briefly, to sketch the leading features of this complicated measure, which appears to have been chiefly framed with the view of imposing *a heavy fine on evictions, securing to the tenant the benefit of his improvements, and enabling him to become the owner of his occupation.* It is impossible, at present, to foretell the effect of the somewhat arbitrary compensation clauses, but it is not unlikely that they will tend to extinguish small occupations, because landlords will fear to subject themselves to the heavy penalties attaching to them.

One can hardly avoid arriving at the conclusion, that political expediency rather than absolute justice induced Parliament to enact them.

Throughout the Act, the tenant is most carefully protected, and with the Ulster custom legalized and his tenancy secured from disturbance, he in fact possesses, as it were, a joint interest in the property with his landlord. This cannot fail to exercise a considerable effect on the value of property, in addition to the revolution it must bring about in the relations between landlord and tenant. It is to be feared that the Act will provoke much litigation on the claims of tenants for improvements, which, after the lapse of time it will be difficult for the landlord to disprove, the presumption being in their favour.

Where the Ulster and other customs do not obtain, landlords will be likely to endeavour to avoid tenancies under £50, in order that they may contract with their tenants to be relieved from the provisions of the measure. The clauses enabling the Government to advance money are very important, and may prove advantageous to the country by affording means for the reclamation of waste land; they will, however, encourage sales to tenants, and it is difficult, at present, to predict the effect which will be produced by the consequent subdivision of estates.

As I have already said, the consideration of this question almost naturally leads us to that of the relations of landlord and tenant in this country, a subject which would appear to be, at this juncture, pre-eminently worthy of discussion by the Members of this Institution.

It is true that the excellent Paper by Mr. SQUAREY, and the discussion that followed, have nearly exhausted that part of the subject relating to the cultivation of the soil; but the important question of the advantages or disadvantages

of leases, and the principles to be adopted in dealing with what are termed permanent improvements, still remain to be considered.

A lease, no doubt, secures to the tenant the advantage of being able to lay out his capital and make the most of his farm, with the knowledge that he will have time to repay himself with interest. It, however, sometimes proves a clog even to him, and it hardly affords such a security to the landlord, in the event of his lessee failing to carry out its provisions in their integrity. I am somewhat inclined to prefer the principle of shorter tenancies, provided that the agreement is framed with a due regard to the interests of both landlord and tenant, and includes some system by which the latter may be compensated for outlay, the benefit of which he has not fully reaped. The important axiom laid down by Mr. HUSKINSON in his remarks on Mr. SQUAREY's Paper, should, however, be kept in view, namely,—that tangible and visible results only should be paid for. I was not surprised to learn from him that the average farming of Scotland, where leases almost universally prevail, hardly equals that of Lincolnshire with its tenant right custom.

The question as to what part, if any, of the outlay for permanent improvements should be incurred by the tenant, is also one which may be considered with advantage. In this term are included those improvements which tend to enhance the productiveness of the land and increase its value permanently, such as the erection of buildings, drainage, water supply and storage, fencing, road making, and the reclamation of waste.

I am disposed to think that works of this character should fall entirely within the province of the landlord, and that the tenant should pay an extra rent rather than contribute the whole, or any part of their cost. The facilities for

borrowing the necessary capital of which the landlord can avail himself, very considerably diminish the difficulties in his way ; but we have occasionally to deal with owners who cannot, or will not, perform even works of necessity, and in cases of this kind the tenant must often bear expenses in self defence.

The comparative advantages of large and small farms is another branch of this subject which affords important matter for consideration. The practice of throwing farms together, and thus getting rid of small occupations, is increasing ; and by diminishing the extent of building necessary for the occupation of the land is of considerable advantage to the landowner. Large holdings tenanted by men of capital encourage a high system of cultivation and afford ample scope for the use of steam power, but have a tendency to lessen the amount of labour employed. This practice, however, would perhaps be of doubtful expediency for the general interest of the community, if small occupations could be maintained in their full productiveness. The difficulty experienced is to be found in the want of the capital necessary to enable the small occupier to obtain the greatest possible return from the land, and at the same time preserve it in condition. If this and adequate skill were forthcoming, no doubt the general supply of produce would be increased.

Two other subjects, connected with this branch of our profession, I would commend to Members as being highly deserving of attention, and I trust that someone may be found to give us a Paper on each. I allude, first, to the management and economy of timber and plantations. Although iron has to a great extent superseded wood in ship-building, and the cultivation of large oak plantations has thus become of less importance, it is quite possible that

some other branch of industry may arise to utilize this material, and there must always remain a large extent of surface which will yield a more profitable return in under-wood or plantations than if devoted to pasturage or arable culture, to say nothing of the value of plantations for shelter.

This latter observation applies particularly to larch, which is a quick growing and most useful description of wood, adaptable not only for building and estate purposes in general, but also for pit-timber, railway and tramway sleepers, and poles for the telegraph service.

The other subject is that of ordinary land drainage (as distinguished from outfall or arterial), on which we have already been favoured, by Mr. GRANTHAM, with a most exhaustive Paper. Details of the cost per acre, the distance of the drains from one another, their depth in various soils, and the effect which has been produced, would be found very useful, and add a valuable item to our statistical information.

Other branches of the profession, more especially that one which deals in various ways with land and buildings in the metropolis, and other large towns and their suburbs, yield abundant materials for Papers of interest equal to these. I may take the opportunity of reminding Members who belong to that branch that they are strongly represented in the Institution, and that Papers would be very acceptable on such subjects as the value of building sites and of the buildings thereon; the costs and results of the formation of new streets; or the conversion of old buildings to other purposes.

I do not know that any other topics calling specially for consideration at present occur to me; but in a profession dealing, as ours does, with so many and such varied interests, lack of useful subjects for discussion can scarcely ever occur,

and the more all such subjects are discussed, the easier our path will be rendered in carrying out the practical business arising from them.

Before concluding, I should like to draw the attention of Members to the large increase in the number of volumes in our library; though this is so, we still require very many standard, text, and other works, to make it the complete library of reference it is our ambition to see it become.

I would, therefore, appeal to all Members who may happen to be possessors of such works, to make contributions to our shelves, and whilst saying this, avail myself of the opportunity of thanking those who have already so contributed works, in some instances, of great rarity and value.

In conclusion I must request the kind co-operation of all in furthering the endeavours of the Council to extend the usefulness of the Institution to the profession in general. It is by the constant interchange of opinions that our ideas are enlarged; and it cannot be doubted that the association of individuals by frequent meeting must have great advantages as compared with the isolation that, up to the period of the foundation of our Institution, characterized our body.

May we not, without extravagance, indulge a hope that before long our Society may include in its ranks every qualified Surveyor in the kingdom, and that its Membership may be sought as an honorable distinction, and guarantee of professional standing and position.

Mr. T. S. WOOLLEY (Member) had much pleasure in proposing a vote of thanks to the President for his Address, and for the very able and clear *résumé* of the Irish Land Act which he had given. He fully agreed with him that the Act would, in all probability, have a most important reflex action upon the relative positions of tenant farmers

and owners of land in England, and felt sure that the Members of the Institution would, eventually, have to meet face to face in this country, legal enactments not very dissimilar in principle. He had experience of its effects already in his own practice, and would mention one case, among several less striking ones, in illustration of his meaning. A farm, of about 600 acres, in Lincolnshire, was let on lease for a term of 20 years, of which 4 years were now unexpired. The lessee being 2 years in arrear of his rent, at Lady-day last, the matter was put into his (Mr. WOOLLEY's) hands by the landlord; on his suggesting to the lessee that he should pay the 2 years' arrears, he declined, urging, that the owner was in his debt, as he had spent £6,000 in permanent improvements on the farm. Now, in the first place, many of the so-called improvements were no improvements at all, in the second place, the lessee's actual outlay was ludicrously overstated, and lastly, all claims for compensation were barred by the conditions of the lease. The tenant indeed fully admitted that he had no legal claim, but urged, that as every speaker in the debates on the Irish Land Bill admitted the principle that unexhausted improvements ought to be paid for by the landlord, he had an undoubted moral claim. This case illustrated, fully, the feeling which all must have perceived to be gaining ground in a less exaggerated form amongst tenants, generally, since the debates referred to, and which cannot fail to have a more or less decided effect on future legislation.

Mr. W. J. BEADEL (Member), in seconding the vote of thanks, congratulated the Institution on having secured, as Mr. CLUTTON's successor, a gentleman so distinguished and held in such high esteem, both socially and professionally, as their new President. He felt sure that he was expressing

the feeling of Members when he said that the Address to which they had just listened, containing as it did, such an able exposition of the provisions of the Irish Land Act, would form a most interesting addition to the *Transactions* of the Institution.

He thought their President had done wisely in calling their attention to the provisions of this Act; and, although he did not believe that a similar measure would ever be applied to England, yet it was a subject for profitable discussion, for, in such an event, the assistance of this Institution in moulding the principles of the measure would, possibly, be sought by the Government.

His friend, Mr. WOOLLEY, had indicated the probability that similar principles might before long be applied to land tenures in England. He would not stop to discuss that now, but as far as Lincolnshire was concerned (and he hoped his friend would not think he was criticising his remarks) he would remind him that compensation in respect of improvements during 20 years only applied to buildings. It was a custom which had grown into legal recognition in some portion of Lincolnshire, that a tenant who erected buildings was entitled to compensation until 20 years' tenure had expired. It was difficult to imagine how the tenant, to whom Mr. WOOLLEY referred, could have expended so large a sum as £6,000 in permanent improvements, unless he built a house and homestead; but his friend would yield to him when he said that compensation for such improvements as draining, chalking, marling, &c., did not apply.

In the latter part of his Address, the PRESIDENT had suggested subjects, which he agreed with him were well worthy of discussion by this Society, more particularly that of plantations, and especially larch plantations. As the PRESIDENT said, they were not only valuable for all purposes

of repairs, but for the protection they afforded, as well as for the profit which they yielded. He trusted that they would have a Paper from one of the many Members of the Society who had devoted attention to the subject.

The motion having been put to the Meeting, and carried by acclamation, the PRESIDENT briefly acknowledged the compliment.

The Meeting then adjourned.

PAROCHIAL ASSESSMENTS

(CONTINUED),

By EDWARD RYDE, MEMBER.

*Read at the Ordinary General Meeting of the INSTITUTION OF SURVEYORS,
November 28th, 1870.*

HENRY CRAWTER, MEMBER, IN THE CHAIR.

SINCE the 9th May last, when the discussion took place upon the Paper, which was read before the Institution on the 25th April, "The Valuation (Metropolis) Act, 1869," has come into operation. A short statement of the chief provisions of that Act may, therefore, not be out of place as a preface to the main subject of the present Paper, which is the Rating of Railways.

The new Act incorporates with it so much of "The Union Assessment Committee Act, 1862," and its Amendment Act of 1864 as is not inconsistent with or repealed by it, and applies to all the unions and parishes which are wholly, or for the greater part in value thereof within the jurisdiction of the Metropolitan Board of Works. In the interpretation clause a successful attempt is at last made at a definition of "gross estimated rental," and "net rateable value," which are there called "gross value," and "rateable value," and are described as follows:—

"The term 'gross value' means the annual rent which a tenant might reasonably be expected, taking one year with another, to pay for an hereditament, if the tenant undertook to pay all the usual tenant's rates and taxes, and tithe commutation rent-charge, if any, and if the landlord undertook to

bear the costs of the repairs and insurance, and the other expenses, if any, necessary to maintain the hereditament in a state to command that rent."

"The term 'rateable value' means the gross value after deducting therefrom the probable annual average cost of the repairs, insurance, and other expenses, as aforesaid."

An early part of the Act contains provisions for the appointment of an Assessment Committee, and the making of a new valuation list for every parish in 1870, and in every succeeding fifth year.

The following are the principal provisions relative to these valuation lists in order of time :—

Every person rateable is, when required, to fill up and make a return on a form supplied by the Surveyor of Taxes to the overseers, and by them to the ratepayers, as to the rent he pays, the owner of his house, its annual value, &c., in any year in which a valuation list has to be made. The Assessment Committee may also require a similar return at any time.

The overseers of every parish are to make and deposit a valuation list of their parish before the 1st of June in every such year, and to transmit the list to the Assessment Committee not sooner than fourteen, nor later than seventeen days after, and if they fail to do so the Assessment Committee shall appoint a person to make the valuation list. All occupiers of hereditaments newly assessed, or whose assessment is raised, are to have notice served on them by the overseers to that effect.

Persons objecting to the valuation list are to give notice specifying the correction they want made, within twenty-five days after the list is deposited. These notices are to be given to the Assessment Committee and overseers, and, in some cases, to the Surveyor of Taxes, who, under this Act, has to receive a copy of the list, and has power to insert his

opinion of the gross value of any property as to which he differs from the overseers, together with powers of appeal, and of inspecting the valuation lists. In all cases of objection or appeal by the Surveyor of Taxes, his view as to the gross value is to be adopted, unless it is proved to the satisfaction of the Committee or Sessions that it ought not to be so.

When the lists and objections have reached the Assessment Committee, they (the Assessment Committee) are to fix a day, before the 1st October, on which they will hold a meeting to hear the objections, giving at least sixteen days' notice of such meeting. Within three days of approving the list, the Committee are to send it to be re-deposited, whereupon any person interested may serve seven days' notice of any objection he has to any alterations the Committee may have made. The Committee are to allow a fortnight after the re-deposit, and then within the next fortnight to hold another meeting for hearing these further objections, and before the 1st November they are to finally approve and sign the list, and send one copy of it to the overseers and another to the Clerk to the Managers of the Metropolitan Asylum District, who is to have the total gross and rateable value of every parish printed, and to send copies of these totals to various official persons within all those counties of which any part is within the Metropolitan area; also supplying copies to any ratepayer at 1*d.* each. The overseers are to deposit their copy of the list with the rate books, publishing a notice of having done so, which shall give information as to the powers of further appeal in the Act. These appeals may be either to Special Sessions, which are to be held in every district so as to enable appeals to be determined between 30th November and the next 1st January, or to the Assessment Sessions, which are to be held so as to enable all its appeals (except in special cases) to be determined between the 1st February and the 31st March.

Persons desirous of appealing to the Special Sessions must give notice before 21st November; but notices of appeal to the Assessment Sessions may be given at any time up to the 14th January; and this Court has powers enabling it to order notices to be given when they have been omitted. The General Assessment Sessions is a new Court established by the new Act, and consists, for the present, of Sir WILLIAM BODKIN (Chairman), Mr. POWNALL, and Mr. KEMSHEAD, who represent Middlesex; Sir THOMAS TILSON and Mr. PENRHYN, the Chairman and Deputy-Chairman of the Surrey Justices; Mr. RYLEY and Captain ROBERTSON, elected from the Kent Magistrates; and Alderman FINNIS and Alderman CARTER, who are chosen by the City. Their clerk is Mr. FRANCIS, of the Sessions House, Clerkenwell, and they have issued orders providing among other matters that all appellants to either Sessions are to pay certain fees, of which they publish a list, and to enter into recognizances, and that by the 1st February every appellant and respondent shall state his case, and the facts to be proved, and the points of law (if any) to be argued in support of it (in writing), each serving nine copies on the clerk for the use of the Court, and one on the opponents. One counsel only for each party, will, according to these regulations, be heard by the Court, and they may order a reference of any matter out of Court, the result of which is to be reported to it. All costs are in the discretion of the Court, and are to be taxed by their clerk. There are provisions in the Act for appeal, in certain cases, from the Special to the Assessment Sessions, and from the latter to either of the superior Courts, but only on points of law, and provided the proceedings are initiated within three months after a decision. The Sessions may also state a case for any superior Court.

The Assessment Sessions may, if it appears there is no

approved valuation list for some parish, appoint a proper person to make a list, and they may, on application of either party to an appeal, direct a valuation of the property which is the subject of the appeal.

When the valuation list is finally settled, it is to be taken as conclusive evidence of value for every rate, assessment, and contribution levied, made, and required in the metropolis, on the basis of value, and also for the house tax and income tax, and for qualifications under the excise laws, for jurymen, vestrymen, guardians, auditors, and managers under the Poor Law Acts.

The valuation list is to be revised every year, except fifth years, by a supplemental list, showing all alterations in the preceding twelve months; but, if there have been no alterations, the overseers are to give a formal certificate to that effect. If within any year the value of any hereditament is *from any cause* increased or reduced in value, the overseers may, or on the written requisition of any ratepayer of the union, or the Assessment Committee, or the Surveyor of Taxes shall, make and send to the Committee a provisional list containing the gross and rateable value of such hereditament as so increased or reduced; and powers of appeal to the Assessment Committee, similar to those hitherto mentioned, are given by the Act. No powers of appeal to Sessions are given in cases of such provisional lists; but, when the annual supplemental list comes to be made, there are full powers of appeal, and in case any property was inserted in a provisional list at a higher assessment than that ultimately fixed in the supplemental list, then the amount of any rate or tax overpaid in consequence shall be repaid or allowed. The Act prescribes the form of the valuation list and fixes the maximum deductions from gross value to rateable value according to the following schedule:—

Class.		Maximum rate of deductions per cent. or proportion.
1	Houses and buildings, or either of them, without land other than gardens, where the gross value is under £20	25 or $\frac{1}{4}$
2	Houses and buildings without land, other than gardens and pleasure grounds, valued therewith for the purpose of inhabited house duty, where the gross value is £20 and under £40	20 or $\frac{1}{5}$
3	Ditto, where the gross value is £40 or upwards	$16\frac{2}{3}$ or $\frac{1}{6}$
4	Buildings without land which are not liable to inhabited house duty, and are of a gross value of £20 and under £40	20 or $\frac{1}{5}$
5	Ditto, of a gross value of £40 or upwards	$16\frac{2}{3}$ or $\frac{1}{6}$
6	Land with buildings, not houses	10 or $\frac{1}{10}$
7	Land without buildings	5 or $\frac{1}{20}$
8	Mills and manufactories	$33\frac{1}{3}$ or $\frac{1}{3}$
9	Tithes, tithe commutation, rent-charge, and other payments in lieu of tithe	To be determined in each case according to the circumstances and the general principles of law.
10	Railways, canals, docks, tolls, waterworks, and gasworks	
11	Rateable hereditaments not included in any of the foregoing classes	

The maximum rate of deductions prescribed in this schedule shall not apply to houses or buildings let out in separate tenements, but the rate of deductions in such cases shall be determined as in classes 9, 10, and 11.

In addition to the above provisions the Act contains many others,—regulating fees, penalties, notices, providing for the correction of clerical and other errors, and dealing with other matters of detail; but enough has probably been given to convey a general knowledge of its nature to those who have not had, as yet, occasion to refer to it. It should be said that in a great many parishes and unions the requirements of the Act as to time have not been complied with. Overseers have not deposited lists by the 1st of June, nor for many weeks after, and Assessment Committees have not in some cases even yet (22nd November) finally approved the valuation lists.

It remains for the forthcoming Assessment Sessions to show whether or not the justices will consider that in these cases new valuations should be made. It is probable that some appeals may be upon this ground, and amongst others it is certain that many of the first appeals will have reference to the subject with which the remainder of this Paper will deal,

THE RATING OF RAILWAYS.

In its broad principles the occupation of a railway company does not differ from that of a farm, and we have to apply to it the same general law. In each case the rate must be made upon an estimate of the net annual value of the several hereditaments rated thereunto, that is to say, the rent at which the same might reasonably be expected to let from year to year.

If the railway and its stations are situated wholly in one parish the rent which a tenant might reasonably be expected to give for the entire property is comparatively easy of demonstration. But difficulty arises when, as is usually the case, the line and its stations are situated in many parishes and the rating for one parish only is the subject for consideration.

Attention will first be directed to the more simple case, and the method of ascertaining the rateable value of an entire railway and its stations will be explained.

The first element of value is what is called the *gross receipts* of the railway, that is to say, the total yearly earnings of the line from all sources of traffic. The second is the *working expenses* or the outgoings which a tenant has to make in earning the gross receipts.

The balance of gross receipts which remains after deducting the working expenses, is called the *net receipts*, and is the fund out of which the tenant's profit and the

landlord's rent must come. Of these, it is obvious that the *tenant's share* must first be provided, because, to take an extreme case, if the net receipts should be found to be insufficient to afford him a proper tenant's profit, he would give no rent to the landlord. But a sufficient tenant's profit being provided, the balance of net receipts remaining is the *rent* which he might be reasonably expected to pay.

From this rent a further deduction has to be made to countervail the depreciation which takes place in the value of the permanent way, and to maintain it in a state to command such rent. The amount of this deduction is the sinking fund, which would be required to be laid by yearly to produce a sum sufficient to renew the railway and works at the period of their ultimate decay.

A hypothetical valuation by way of illustration is appended to the Paper.

In estimating the occupier's share in valuations of this kind, five per cent. for ordinary interest on the tenant's capital, and ten per cent. for trade profits, is usually allowed. The arbitrator in the case of *The Great Eastern Railway Company and Haughley Parish* found these two amounts to have been properly deducted. It is indeed obvious that, as regards the interest, a tenant requiring to borrow his capital on the security of his rolling stock, would have to pay as high a rate as five per cent. per annum, or, if it were his own capital, he should be allowed that rate of interest, because he would have no difficulty in obtaining it from a person offering the same security. It may also be presumed as reasonable that no tenant would be satisfied to calculate on a less amount of profit than ten per cent. on his capital, when taking into account the rent he would pay to his landlord.

Five per cent. is also very commonly taken as a proper insurance fund against risks and casualties, and five per cent. for depreciation of rolling stock. These items are more

speculative in their character than the former ones; but, being so, a tenant would probably take care to be on the safe side, and it is not reasonable to suppose he would undertake to give a higher rent than would allow him to make ample provision for these contingencies. The depreciation of rolling stock will be more or less according to the sum expended from time to time on its repair.

The question of amount of *tenant's capital* has been the subject of judicial decision. In what is known as *The North Staffordshire case*, it was decided that the amount of tenant's capital is to be the actual value at the time the rate is made (and not the cost price) of the rolling stock, and of the moveable chattels. But things so attached to the freehold as to become part of it, and things which, though capable of being removed, are yet so far attached as that it is intended that they shall remain permanently connected with the railway or the premises used with it, and remain permanent appendages to it as essential to its working, are not to be taken as things which an incoming tenant would have to purchase of an outgoing tenant, and for which he would have to provide capital.

The *chattels* are defined to be things moveable, such as office and station furniture. It was also clearly the intention of the Court to include all manner of tenant's tools and implements necessary for carrying on the business of the company.

The *fixtures* are turn-tables, cranes, weighing machines, stationary steam engines, electric telegraph and apparatus, gasworks, and such like.

The allowance in respect of *renewal of way* was judicially settled in *The London, Brighton, and South Coast Railway (Croydon) case*. In that case it was decided that, although no charge had, in fact, been made, either by way of

outlay or setting apart of the gross receipts, still, if the depreciation be, as it probably is, both certain and capable of an annual average, though not proper to be, in fact, repaid annually, it should be met by laying by a certain sum annually. The judges said, "We have considered this question with much attention, and upon the whole, we think that the company are entitled to a deduction on this head. We cannot make a substantial distinction between this and house property, or any other of a perishable nature which must require renewal; and, although we think that the company ought to set apart the sum which they claim to deduct, we cannot compel them to do so in this indirect way. And we think that, whenever the time shall come for actually making the restoration, they will be estopped from claiming more than that annual deduction which they now insist on, exactly as a landlord could not claim to deduct the expenses of restoration made by him of a house."

The amount of this deduction is arrived at by estimating the probable duration of life of the several component parts of the permanent way, and by calculating the sum which, if set aside yearly and allowed to accumulate at compound interest, would amount to the sum required, at a definite period, to reproduce particular parts of the permanent way.

The difference between *gross estimated rental* and *rateable value* of lines of railway is difficult to define.

The cost of maintaining the railway is included in the working expenses, and is therefore deducted from the gross receipts before the rental, as described herein, is arrived at.

But the rent which a tenant might reasonably be expected to pay on lease, he providing the sinking fund, for the ultimate renewal, is beyond doubt the *rateable value* of the property.

The second and more difficult branch of the subject, the mode of determining the rateable value of the railway in one of many parishes in which it is situated, has now to be explained.

The same principles and the same general law must still be applied to the enquiry, and so applied that under no circumstances must the aggregate value of all the parts be made to exceed the value of the whole.

In *The West Middlesex Waterworks case* the judges said, "In practice, a tenant of the parochial portion of a canal, railway, gasworks, waterworks, or the like, has rarely, if ever, been known. But a hypothetical tenant must be assumed, and the terms of such a tenancy are not difficult to be conceived. If in the hypothesis some necessary incidents are also assumed to be involved, such as, first, that each part of the apparatus is to continue in joint co-operation, no one tenant of an essential part being able to stop his part; secondly, that the title to the required land is permanent, so that there is no risk of being compelled to move fixed capital; thirdly, that there is land in the required quantity, and capital to be invested therein, and occupants ready to take and work parts yielding profit as tenants at rack rent, and parts not yielding profit as contractors for remuneration, provided any greater profit can be obtained than is ordinary in such relations. If a tenancy of each parochial part be assumed, according to this hypothesis, then, although each parish rates separately upon its own estimate of the value of the part lying within it, and the law gives no power of making all the parishes co-operate in rating the several parts lying in each, nevertheless this Court is bound to protect the occupier of such an apparatus from being rated beyond the rateable value of the whole taken together; and it is in reference to this protection that the Court must take into its consideration at once, all the

separate rates as so many claims upon one given fund, and must apportion that fund, bearing in mind that every addition to the rateable value assigned to one parish must be a subtraction from the rateable value which might be given to some other parish."

Following the order of valuation already explained, the first thing to be ascertained is the amount of *gross receipts* due to the given parish.

In the early days of railway rating, a valuation of the entire system of a railway company, trunk and branches, was made, and the rateable value of the whole ascertained. This rateable value was then divided among the parishes in proportion to the length of line in each. This principle became known as "*the mileage principle.*"

In favour of this principle it was urged that parish authorities had no power to ascertain the particulars of profit and outgoings, from a comparison between which the rateable value of the land occupied is to be deduced, both profit and outgoings being affected by circumstances spread over the whole line. On the other hand it was urged that although as regards the railway company, an entire body with an entire interest, it is matter of indifference how you divide a rate, assumed to be entire for the whole line, yet, as the parishes are bodies with separate interests, there is a manifest injustice in attributing to the same space of land the same proportionable share of the whole rate everywhere (the land in the several parishes notoriously earning the profits, and occasioning the outgoings in very different proportions); because you cannot do this without depriving some parishes of what they should receive, in order to give to others what they should not have.

It was further urged that the ordinary principles of ascertaining the actual rateable value of the land occupied by the company in each parish by the rules which are appli-

cable to any other land occupied by other bodies or persons for other purposes, were departed from by the application of this mileage principle.

Assume for example, a farm of 300 acres worth to rent £450 per annum. By the principle of equal distribution in proportion to area each acre of this farm has a rateable value of 30s.

But assume the facts to be that 100 acres are worth 50s. per acre, or £250 per annum, and 200 acres 20s. per acre or £200 per annum, and assume further that the 100 acres of 50s. land are in parish A, and the 200 acres of 20s. land in parish B.

The rateable value in parish A is £250, in parish B £200.

The application of a principle similar to the mileage principle would give parish A £150, and parish B £300.

The occupier of the farm would be uninjured, but parish A would lose £100 a-year, which parish B would gain.

It was soon found that this state of things could not continue, as the mileage principle and the reverse alternately found favour according to the nature of the interest of the contending parties.

The London, Brighton, and South Coast Railway Company contended that they ought to be rated in respect of that portion of their railway situated within the parish of *Croydon*, in such proportion to the net earnings of the whole line of railway as the length of that portion within the parish bears to the whole length of the whole line of railway. On the other hand, *The South Eastern Railway Company*, in the parish of *Westbere*, and *The Midland Railway Company*, in the parish of *Basford*, found it more favourable to say that a rate was bad which was made on exactly that principle.

In February 1851, the judgment of the Court of Queen's Bench upon this point, was given in these three cases, as follows :—

“Upon the legal question,” the judges said, “we have no doubt. The poor rate and the principles of its assessment are entirely statutory. Stat. 6 & 7 Will. IV., cap. 96, made expressly with a view to establish one uniform mode of rating for the relief of the poor, prescribes the rule: the rate must be made upon an estimate of the net annual value of the several hereditaments rated thereunto, such value to be arrived at as in manner stated in the first section. The subject is parochial; the inquiry is to be conducted by local authorities with limited powers, if any matters specified in the section are locally situated without the parish,—that is, if any such affect the amount of the ‘net annual value’ or ‘rent at which the same might reasonably be expected to let,’ they will of necessity fall within the range of the inquiry; but beyond this, the principle does not go. This principle, so limited and understood, was not first created by the statute just mentioned. The Court has decided so early as 1827 in the case of *Rex v. Kingswinnford*, that it was to be found in the original statute, 43 *Elizabeth*, c. ii., and since that decision it has been uniformly applied to cases where the same party, whether company or individual, occupies in different parishes land forming one entire property, such as a canal, though the profits may be earned in different proportions and with a different rate of outgoings in each. The value which the land occupied in each parish produces, after the due allowances, is that upon which the occupier is to be rated in each.”

On these broad principles, therefore, that the statute provides but one rule, and intends to secure uniformity, the judges ruled against “the mileage principle,” and in favour of what has ever since been known as “*the parochial earnings’ principle*.”

This principle can be very simply explained. Each separate piece of traffic, whether passengers or goods, is

taken into account and divided among the several parishes through which it has passed in proportion to the length of line traversed in each parish, *i.e.*, if a passenger pays one hundred shillings for travelling one hundred miles, every mile of railway over which he passes is considered to have earned one shilling. By this means the parishes through which the greatest number of passengers or the largest amount of traffic passes, the distance traversed being duly considered, secure the largest amount of gross receipts,—and, under this decision of 1851, which is strictly in accordance with the principles of valuation invariably applied to other descriptions of property, railways are valued.

Having thus ascertained the gross receipts in the parish, the next step is to allocate to those receipts a proper share of the working expenses.

First in order is—

Maintenance of Way.—In this particular item the question to be determined is what expense, on an average of years, will keep the subject of assessment at the value which is the measure of that assessment. This usually admits of an easily-ascertained mileage charge, and, on it, as a rule, no great controversy arises.

Locomotive Expenses.—The deductions under this head are measured by the number of miles traversed by engines in the parish.

Carriage and Waggon Expenses.—These must be apportioned according to the number of carriage and waggon miles. It may be necessary to explain that the expression *carriage mile* applies to every mile run by a single carriage or waggon. A train consisting of one engine and ten carriages makes, upon every mile of its journey, one engine and ten carriage miles. Much confusion sometimes arises from the want of a clear understanding on this point. An engine running without a train makes an *engine mile*, but that is

called light running. A *train mile* may comprise one engine mile or two engine miles, according as there may be one or two engines attached to the train, and it may comprise any number of carriage miles, limited only by the number of carriages which can be drawn by the engines. If the price per carriage mile can be deduced from the company's accounts, so much the better; but the sum of a farthing per carriage mile will be found in the south of England to be a very close approximation to the actual cost.

Traffic Expenses and General Charges.—Unlike the three former items of deduction, this is general, having no more connection with, or influence on, one part of the line than on another. It is incurred for the sake of the whole line, and contributes to the profits everywhere. It is, therefore, usual to divide these expenses in proportion to the gross receipts.

Government Duty.—This being a charge upon certain classes of revenue, it admits of a very easy apportionment, according to the amount of such revenue.

Tithe Rent-Charge.—This may be allowed at its apportioned sum.

Rates and Taxes.—The deduction under this head must be calculated on the rateable value of the railway as deduced by the valuation, at the number of shillings in the pound to which the rates in the parish may amount.

The above items of deduction having been taken from gross receipts, the balance remaining would be the net receipts due to the parish if the rateable value of the whole concern had simply to be divided among the several parishes in proportion to the length of railway and the parochial earnings in each parish. But here it must be borne in mind that the entire works consist of two parts. Firstly, the *line of railway*, directly producing profit; and, secondly, the *stations* (including station buildings and sidings) indirectly conducing to such profit.

The stations being rateable in the several parishes in which they are situated, the aggregate rateable value of the whole of them must be deducted from the rateable value of the entire undertaking whenever it is necessary to determine the rateable value of the line only; and, as every part of the railway derives an indirect benefit from the use of the stations, a proportionate deduction must be made in respect of stations from the net receipts due to each separate parish, whether such parish has a station within it or not.

The use of the stations being, as nearly as it is possible to determine it, in proportion to the amount of gross receipts, the deduction in this respect is always made in the proportion which the gross receipts due to a separate parish bear to the gross receipts of the entire undertaking.

The mode in which the *rateable value of the stations* should be ascertained was judicially decided in *The North Staffordshire case*. The parish officers of *Rushton Spencer*, in that case, contended that the deduction to be allowed in respect of the stations, buildings, and sidings along the line of railway, ought to be ascertained by taking the proper rateable value of the land occupied by them as enhanced by their construction; the true rateable value at which the stations ought to be assessed, and not that at which they may be actually assessed, being the true standard of rateability. The appellants contended that they were entitled to deduct six per cent. upon the actual cost of original construction, in the absence of proof that such cost was excessive.

The Court decided that the deduction must be calculated upon the actual value at which they ought to be assessed, and not on the original cost of construction.

The *occupier's share* of the net receipts is determined in each parish, on the same principles as those already explained as applicable to the entire system of railway.

The amount of *tenant's capital* due to each parish is generally in proportion to the gross receipts in the parish, as compared with the gross receipts of the entire system ; but to this there are sometimes exceptions, which must be dealt with according to circumstances when they arise.

The *renewal of way and works* is estimated in the same manner in the case of a parish as in that of the whole system. The cost of the materials and labour required for the renewal is estimated, and such an annual sinking fund is allowed as will provide the required sum at the estimated period of decay.

An outline valuation, by way of illustration, is appended to the Paper.

The subject would not be exhausted if reference were not made to the question of "*contributive value*," notwithstanding the decision in the case of *The Great Eastern Railway Company and Haughley*, which has probably set at rest this question for some time to come.

The advocates of "*contributive value*" contended, that although a branch railway might be so unprofitable as to possess no rateable value *per se*, yet still it might, by its capacity to feed a main line, be worth a rental at the hands of the proprietors of the main line quite irrespective of its local value, and that such a rental as they might be reasonably expected to give, would be the measure of rateable value of the branch railway, divisible among the parishes through which it passed.

Of course any such assumed value on the branch would have to be deducted from the value of the main line, because, as already explained, the aggregate value of the several parts cannot exceed the value of the whole.

Practical men experienced much difficulty in dealing with the matter, and the frequent transactions by companies in which branch lines, said to possess no value in

themselves, were purchased for large considerations, did not in any way tend to diminish the difficulty.

Such lines of railway may be compared with accommodation land. Take by way of illustration a piece of meadow land, the property of a separate owner, situated in the centre of a gentleman's estate, and within sight of his drawing room windows. For such a piece of land a person would be willing to pay a much higher rent than its ordinary annual value would justify; or, if he could acquire the fee simple, he might be reasonably expected to give a larger price for it than anyone else would give, for the purpose of preventing a nuisance which might militate against the enjoyment of his adjoining property, and would certainly depreciate its value. But assume the time has come when he has been able to purchase the land, has grubbed the hedges, and thrown it into the adjoining land, so that the whole has become one estate, it possesses then no element of value, beyond that which it shares in common with the land of which it has then become a part.

This was the case with the railways. Take as an illustration a branch line of small value *per se*, but a separate property. From it two separate main lines of railway compete for the traffic to London.

It is not unreasonable to suppose that the proprietors of either of the main lines would give for the branch more than its value *per se*, because, by its acquisition, they would secure not only the local traffic, but also the traffic to London, inasmuch as a traveller would not change carriages for the mere purpose of travelling on the rival line, if he could be carried through without change; and thus the company possessing the branch would control the traffic thereon to its destination. But so soon as the branch has become the same property as one of the main lines, it

may be urged that it does not feed the main line any more than the main line feeds it.

In the *Haughley case* the respondents placed their case upon the ground that, in respect of the traffic which passed over *Haughley*, as well as other parts of the line, each mile of the railway over which the traffic passed, must be regarded as contributing equally to the earnings of the profits derived from that traffic; in other words, that, if the same traffic is carried at a much greater profit over one part of the line than over another, still each part of the line must be considered as equally earning the profit.

The judges said, "the first question presented to us is, whether in assessing the railway in the parish of *Haughley*, the traffic beyond *Haughley* is to be taken into account with a view to reduce the expenditure of the line in the parish of *Haughley*; for, of course, the lower the expenditure can be reduced, the larger will be the amount of property in *Haughley*, and therefore the greater the rateable value of the line in that parish. It is correctly stated that beyond *Haughley*, on the route to London, a great accession of traffic takes place, and that the carriages which start from *Norwich* with a limited number of passengers, are, before they arrive in London, filled with a large accession. It is said that the effect of this additional traffic is to reduce the rate of expenses with reference to each individual traveller; and that, therefore, taking the case of those individuals who have started from *Norwich*, it is not the expense of carrying those passengers through the parish of *Haughley* for which the estimated expenditure is to be made, but all the other passengers that join the railway and occupy carriages after the train has proceeded on must be also taken into account. It is a very ingenious mode of putting the argument, but there is a plain and palpable fallacy in it. Take the coach from *Norwich* to London: the expense of running it from

Norwich to London was so much per mile, with little or no variation throughout the journey ; so it is, upon an average, the same with a railway. Sometimes the coach carried five passengers, and sometimes fifteen. If it carried five it probably worked at a loss, and if it carried fifteen, it worked at a profit, but the expenses were the same. So it is with the railway. The question to be answered, according to the authorities, is, what is the rateable value in each parish throughout the line of railway which passes over a great number of parishes ? That is made up of these two elements, the actual earnings in the parish attributed to the parish, and the actual expenses attributed to the parish. On the simple ground that the actual profit earned is much greater in some parishes than it is in others, the rateable value in those parishes is greater than it is in others. It appears from all the cases that a railway is rateable in the parish where the particular profits are earned ; it matters not where they are received. It is so laid down in several cases, and particularly in the case of *Rex v. Kingswinford*, and *Reg. v. London and South Western Railway Company*. So again in *Rex v. Lower Mitton* it is laid down that, if a portion of a canal in one parish is more productive than portions in other parishes, either because there is more traffic, or because the yearly outgoings and expenses there are less, it ought to be assessed at a higher proportionate value ; and it is decided in *Reg v. London, Brighton, and South Coast Company* that the value which the land occupied in each parish produces, after the due allowances, is that upon which the occupier is to be rated in each. The learned arbitrator has ascertained what the actual gross receipts were in the parish, and then he makes certain deductions from them, and after those deductions he arrives at what is the net annual value in the parish of Haughley. No better mode of ascertaining that annual value has been suggested,

and none which would not involve greater difficulty, or lead to greater inconvenience and greater probable injustice, than the one which the learned arbitrator has adopted."

In the case of a railway the property of one company, but jointly used by two or more companies, it has been laid down that all the traffic is to be taken into account, as though it belonged exclusively to one company, and that the proper deductions should be made therefrom. It was held in the case of *The Queen v. the London, Brighton and South Coast Railway Company*, that in estimating the rateable value of the *Brighton line* in the parish of *Croydon*, the traffic of *The South Eastern Railway Company* passing over the line, as well as that of the *Brighton Company*, should be taken into account.

The judges said, "The subject of the transaction between the appellants, *The Brighton Company* and *The South Eastern Company* seems to be this: that the traffic of the latter is to pass over a certain portion of the line of the former, in consideration of the traffic of the former passing free over a certain portion of the line of the latter. A certain distance, between two and three miles, of the appellants' line, within the parish of *Croydon*, is affected by this arrangement. We think that the Sessions rightly decided this to be rent in kind, earned by this land. It seems to us exactly the same in substance as if so many tickets were daily issued, without money paid for them, to *The South Eastern Railway Company* in return for so many received from them. The tickets mutually transferred would, on either side, represent so much money earned. But then, we think these earnings must be subject to the same deductions as if they were received in money."

Stations.—Hitherto, stations have been referred to so far only as it has been necessary to make a deduction in respect of them in estimating the rateable value of a piece of a line

of railway. The method of rating each station in the parish in which it happens to be situated has now to be explained.

It must still be borne in mind that the rateable value of all the parts of a railway, lines as well as stations, cannot exceed the rateable value of the whole, and that the rateable value of each separate station is the rent which the hypothetical tenant of a railway might be reasonably expected to pay for it.

As already explained, it was laid down in *The North Staffordshire case* that the rateable value of the stations must be calculated at the actual value at which they ought to be assessed, and not on the original cost of construction. It was well put by Lord DENMAN in his judgment in the case of *The Queen v. The Overseers of Mile End Old Town*, that the rule of law laid down by Act of Parliament for ascertaining the rateable value of any subject refers to an estimate of the rent it should yield: that the outlay of capital might furnish no such criterion since it may have been injudiciously expended, and what was costly may have become worthless by subsequent changes.

A station may be too large for the requirements of the traffic, in which case the amount of rent which a tenant could be expected to give for it for a year, or from year to year, would only be in proportion to the use which he could make of it. A station on the top of a high viaduct would be much more costly to erect than one on the level of the adjoining land; nevertheless, the station on the level would be worth a greater rent to the tenant, because it would be much less expensive for him to work, and much more convenient to his customers—the public. A station on two levels, say a passenger station above, and a goods station below, must be less valuable to a tenant than a station of equal area all on one level.

A station originally constructed for the accommodation of a given traffic, which may have been subsequently diverted by the opening of a new line, or by other causes, is not worth so much to a tenant as its original cost would imply. In such a case, so much of the station as exceeds the requirements of the traffic would be an incumbrance to the tenant instead of a benefit; just as a farm homestead, originally intended for the accommodation of 1,000 acres of land, would be of no more value to the tenant of only 500 acres than a homestead suitable for the lesser quantity of land would be; indeed, the larger homestead would entail upon him repairs, to the cost of which he ought not to be subject.

In the case of *The Queen v. Fletton*, in 1859, a judgment was given which, at first sight, appears to be a little conflicting with other judgments, so much so, that the present Chief Justice BOVILL, who was counsel for the appellants, *The Great Eastern*, then *The Eastern Counties Railway Company*, subsequently asked leave to mention the case to the judges on the ground that the judgment had possibly proceeded from a misapprehension of the facts; but Chief Justice COCKBURN said that there had been no such misapprehension. The facts of the case were, shortly, these:—*The Eastern Counties Railway Company* were, in 1843, the sole proprietors of the *Peterborough station* in the *parish of Fletton*. In that year, they entered into an agreement with *The London and North Western Railway Company* whereby the latter Company were, for 999 years, to have the joint use of the station in consideration of a fixed payment. Subsequently, *The Great Northern Railway Company* diverted a considerable portion of the traffic from the *North Western* to their own line, and the station at Peterborough became diminished in value to a very large extent. The appellants contended that, in estimating the rateable value of the

station, regard should be had to the use made of it by the two companies at the time of making the rate. The parish contended that the fixed payment made by *The North Western Company* ought not to be left out of the calculation. It must, however, be mentioned that the appellants admitted that, for the purposes of the case, they were to be deemed the persons rateable in respect of the whole occupation.

On this statement the judges decided that the hypothetical tenant, coming into the place of *The Eastern Counties Company*, would take into account the amount to be paid to him by *The North Western Company* for their use of the station, and, therefore, that that payment must also be taken into account in estimating the rateable value of the station; but the judges seemed to contemplate that an altered state of circumstances might very easily be brought about, under which the rateable value of the station might be different. They laid it down that the true principle was to assume the continuance of the circumstances constituting the value to the existing occupier unless it was made to appear that those circumstances were about to undergo a change.

. The rateable subjects in a railway station are numerous, and will at once present themselves to the mind. Among them are—

The booking offices, waiting rooms, refreshment rooms, platforms, sidings, turn-tables, goods warehouses, carriage sheds, engine houses, tanks, cranes, and other fixed plant necessary for the use and working of a railway. The rateable value of all these depends upon their extent, construction, convenience, the accommodation they afford, and the beneficial use which may be made of them, the rateable hereditament being the land on which they stand, or to which they are affixed, enhanced in value by them.

Under the provisions of certain Acts of Parliament,

among them "The Public Health Act, 1848," land used only as a railway is to be assessed to the district rates on one-fourth of its net annual value only. It has long been conceded by railway companies that this exemption did not apply to railway stations, but it was reserved for the case of *The South Wales Railway Company v. The Swansea Local Board of Health* to obtain a judicial decision as to what is to be considered as "land used only as a railway," and what as "station." The judges said, "The line itself, the sidings, and the turn-tables, on which the carriages actually go, and so much of the land at the side as is occupied for the necessary support of these are, in every sense, part of the railway, and so much of the platform as is of the same width as the side of the railway adjacent is, like it, to be considered as part of the railway, but the rest of the property is liable to the full rate."

There is a more recent case, that of *The Midland Railway Company v. The Council of the Borough of Birmingham*, in which the judges have fully confirmed the decision in the *Swansea case*, that "the railway, on a reasonable construction of it, seems to be not only the actual line of railway necessary for carrying goods and passengers from A to B, but all the turn-tables, and sidings, and so on, which are necessary for the purpose of conducting the traffic of the railway. If they are sidings which are not used for that purpose, and not necessary for that purpose, but which are in the nature of warehouses, then they become rateable at the full value."

This judgment unfortunately gives rise to much litigation at Sessions. The question arises under it: What are "sidings not used for that purpose, and not necessary for that purpose, but which are in the nature of warehouses?" It has been contended that a siding leading to that part of the goods station of a railway used as a coal depôt is such a

siding, because trucks belonging to a coal owner sometimes stand on it, laden with coals consigned to a coal merchant in the adjacent town, who may often dispose of the coals to a customer before they are unloaded from the trucks, and the customer may even fetch them away in his own carts. Again, it has been alleged that a siding leading to the repairing shops of a railway company is a siding unnecessary for the purpose of conducting the traffic of a railway company, because the company could conduct such traffic without being the repairers of their own stock, which they could send off their premises to be repaired.

Judgment and discretion must be exercised in solving these and all questions connected with railway rating, and the circumstances of each case must be individually considered.

VALUATION OF AN ENTIRE RAILWAY.

GROSS RECEIPTS:—

Being the entire earnings of the railway for one year					
from all sources of traffic	...	...	...	...	£500,000

WORKING EXPENSES,

Including—

Maintenance of way	...	...	...	...	...	} 250,000
Locomotive expenses	...	...	...	...	...	
Carriage and waggon expenses	...	...	...	...	...	
Traffic expenses and general charges	...	...	...	...	...	
Government duty	...	...	...	...	...	
Tithe rent-charge	...	...	...	...	...	
Rates and taxes	...	...	...	...	...	}

<i>Net receipts</i>	...	...	...	...	...	£250,000
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OCCUPIER'S SHARE,

Including—

Interest on capital	...	...	...	...	...	} 125,000
Trade profits	...	...	...	...	...	
Insurance against risks and casualties	...	...	...	...	...	
Depreciation of rolling stock	...	...	...	...	...	

<i>Gross estimated rental</i>	...	...	...	...	£125,000
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STATUTABLE DEDUCTIONS:—

Annual sinking fund, to provide for the renewal of way and works					
...	...	...	...	...	20,000
<i>Net rateable value of the railway and stations</i>					
...	...	...	...	...	£105,000

PARISH VALUATION.

GROSS RECEIPTS

For a year, attributable to the parish, ascertained on "the parochial earnings' principle," say	£5,000
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WORKING EXPENSES,

Including—

<i>Maintenance of Way</i> : calculated according to the length of line in the parish	2,500
<i>Locomotive expenses</i> : in proportion to the miles run by engines in the parish, and including share of light running, shunting, piloting, and assisting	
<i>Carriage and waggon expenses</i> : calculated on an esti- mate of the miles run by carriages and waggons in the parish	
<i>Traffic expenses and general charges</i> : charged in the proportion which the gross receipts in the parish bear to the gross receipts of the whole system ...	
<i>Government duty</i> : in proportion to the amount of traffic in the parish chargeable therewith ...	
<i>Tithe rent-charge</i> : the apportioned sum arising out of the land occupied by the railway in the parish	
<i>Rates and taxes</i> : according to the rate in the pound with which the assessment is chargeable, and upon an assessment equal to the result of the valuation	

Net receipts in the parish due to line and stations	£2,500
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RATEABLE VALUE OF STATIONS,

In proportion to the gross receipts, say	200
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Net receipts due to the line of railway in the parish	£2,300
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OCCUPIER'S SHARE,

Including—

Interest on capital employed	1,250
Trade profits	
Risks and casualties	
Depreciation of rolling stock	

Gross estimated rental of line in the parish ...	£1,050
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STATUTABLE DEDUCTIONS:

Renewal of way and works, an annual sinking fund	200
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Rateable value of the line of railway in the parish	£850
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A vote of thanks to Mr. RYDE having been proposed by Mr. E. N. CLIFTON, seconded by Mr. C. J. SHOPPEE, and carried unanimously,

Mr. W. HUDSON (Member), responding to the invitation of the Chairman, said that he scarcely felt prepared to address himself to this subject, his experience being not so much in railways as in railway stations, houses, and business premises in the metropolis. He feared he could add but little that was of use in this discussion. It appeared to him that, speaking generally, railway companies were rated very much at whatever sum they chose, inasmuch as it rested with them to furnish the returns of receipts and deductions of every kind. It was customary in such cases to take into consideration the profits made by railway companies, a practice which seemed to him at variance with the course adopted in other assessments. They did not in this manner go into the profits made by tradesmen. Two men might carry on trade in houses of similar value, and, while the one might make a fortune, the other might earn no profits at all, a fact which he supposed applied equally to railways. In the case of railway assessments, calculations, based upon the structural value, or a per-centage on structural value, could not be maintained, because (though it was often useful to ascertain the facts with regard to structural cost and intrinsic value) that principle might be carried to an absurd extent, and could not be relied upon as a proof of rateable value. The costly viaduct was not more valuable to the general undertaking than the less expensive portions of the railway, and only formed a portion of the same line. At the same time it was necessary to ascertain the structural value (particularly in respect of stations in the metropolis) in connection with the value of the land occupied, and the doing so would always assist the surveyor in arriving at

the rateable value. Gas and water companies, whose charges to their customers took very much the shape of rental, were exceedingly unwilling to have their profits looked into, but, in place of this, were willing enough to give an account of the cost of their works of every kind, and to be rated at a per-centage upon the ascertained amount, a system of valuation at variance with that which Mr. RYDE appeared to recommend for adoption in the case of railways.

Mr. W. BROWN (Member) called the attention of Members to a judgment given in the Court of Queen's Bench, last Saturday, in the case of the Grand Junction Canal Company and the parishes of Hemel Hempstead and King's Langley, in Herts. The case was peculiar in this, that by the original Act, the Canal Company was to be rated only in the same proportion as adjoining lands; he thought the judgment touched on several points worthy of consideration by surveyors employed in such valuations.

Mr. W. REX (Associate) would mention the peculiar case of the West London Railway, a line with no tickets or fares, and made without shareholders. The line was constructed by the contributions of the London and North Western, the Great Western, the South Western, and the Brighton Companies. Each company had running powers over the line, and each conveyed its passengers to any of the stations on the line, from its own main line, free of extra charge. They were rated to Fulham parish at £2,000, and they appealed to be rated at £300. The property taken for the line was worth about £1,500 a year according to the rating of the parish. But there was nothing whatever to show what the earnings of the line were. It was merely an accommodation line, and it appeared

to him almost impossible to get at the actual earnings by the respective companies, which were hardly known to the companies themselves. They stated at the time they could produce no accounts which would show the earnings; and it was not concealed that these arrangements were made to baffle the parishes. Since then, the traffic of the line has so increased, that the assessment has been put up from time to time.

Mr. G. TAYLOR (Associate) remarked that the rating of railways seemed to be a question which puzzled the Assessment Committees appointed under the Act. With reference to the Act, to which Mr. RYDE had referred, it would be better, instead of selecting vestrymen to act as the committee, to appoint competent surveyors as assessors, and he believed the ratepayers and the railways would, under such a system, have fairplay. That Act, instead of giving satisfaction, would create a large amount of dissatisfaction. Occupiers did not understand the difference of meaning between gross value and rateable value. People had called upon him and he had instructed them; but in many cases those who did not receive instruction put the same amount for gross and net annual value; consequently, they would have to pay increased amounts of local rates, and the landlords would have to pay more to the Imperial Exchequer. He could state as a fact that the rateable value of the parish of Lambeth had been increased by £80,000 under the new assessments of "The Metropolis Valuation Act."

Mr. E. J. SMITH (Member) suggested the desirability of resuming the discussion of the Paper on some convenient evening after the 14th January, inasmuch as on that date, the notices of appeal to the Assessment Committees were to be given. It was evident, he said, from the information

their friend had given them, that the result of these appeals was a subject of much uncertainty, both as to matter of fact and of form. After February, they would probably be in a better position to discuss the policy and effect of the Act referred to.

Mr. RYDE, in reply, said, with reference to the remarks of the last speaker, that some Assessment Committees with which he was acquainted, dealt with rent irrespective of the nature of the holding, and often deducted from a leasehold rent the per-centage mentioned in the schedules in this Act; when, in fact, the tenant paid the outgoing for insurance and repairs in addition to that rent. The method in some cases adopted (which however ingenious was inapplicable) was this; to the rent paid they added ten per cent. for gross estimated rental, and, from the aggregate, deducted sixteen per cent. to get at the rateable value. When the absurdity of this was pointed out, the reply was, "there's the sewers rates and land tax which the Legislature did not think of." The Act was not producing equality but great inequality of rating, for the principle of it was applied, without discrimination, to all classes of buildings; to old buildings where the annual cost of repairs was very serious, and to new brick dwelling houses where it was next to nothing. He could not agree with Mr. HUDSON's remark that the rating of railways was, practically, very much what the companies themselves liked to be rated at; indeed, the exact converse seemed to him to be the case, and they were rated at amounts of which they disapproved exceedingly. It was the fact that, under this Act, certain railways were being rated at rack rents (because there was no way of getting away from the rack rent), while other properties were not subjected to such a system.

As to profits of trade; it was a mistake to suppose that the profits of railways were rated. If a railway

valuation were properly made, the profits would be taken out of the calculation: five per cent. being allowed for the ordinary interest on the tenant's capital, and ten per cent. for trade profits. It was, in fact, the same principle as that applied in the valuation of a farm, if it were done theoretically, *i.e.*, they ascertained the amount of the produce and the cost of production, and the balance was composed of tenant's profit and rent. Mr. HUDSON's illustration of the two tradesmen—one making a large profit and the other none at all, in houses of similar value,—was hardly parallel to the question, for the tenant of a house was expected to pay the rent at which the house might “reasonably” be supposed to let. Take a house in an ordinary position: the ground rent value would be capable of demonstration, and the fair interest upon the outlay for the building also. If one landlord would not let a house for the ground rent, *plus* the interest, another would, and there competition came in. It had been suggested that in the metropolis, and other large towns, a railway station often occupied the sites of buildings, which were of a greater rateable value, and so the parish, lost on the rating. No doubt that was sometimes the case, but the converse was more frequent. Take the case of the parishes of Merstham and Coulsdon: the average value of land there was not more, at the outside, than 40s. per acre per annum. The railway took, say, 15 acres per mile, which at 40s. would be £30 a mile; but what was the fact? The South Eastern and the Brighton Companies together (using the same lines of rail) paid seventy-five per cent. of the whole local taxation of those parishes. Here, therefore, was a case in which a property of high rateable value had been substituted for one of small value. At Coulsdon there was no station; the Company made no paupers and used no roads.

It was suggested by Mr. HUDSON that there were

cases in which structural value of buildings, *plus* the value of the land, must be taken into account. By way of illustration he would mention that the London Docks were situated in four parishes, in one of which—Shadwell—there was only a deep water basin, which earned very little : in another parish, a second basin ; but the warehouses were virtually all situated in one parish. The rateable value of the whole concern was equal to about three per cent. on the money spent on the undertaking ; and, assuming that half the capital was spent on the buildings in this one parish where the buildings were situated, if they put six per cent. (the fair rate of interest on buildings) upon these buildings of the London Docks, they consumed the rateable value of the whole concern upon that one parish ; and yet the London Docks could not carry on their business without this deep water basin and other property, not consisting of buildings, and situated in another parish. In the Grand Junction Canal case, to which Mr. BROWN referred, he thought the litigation turned more upon the interpretation of the special clause of the Act than upon anything else.

The case of the West London Railway and Fulham parish had been referred to by Mr. REX. The law defined the way in which the receipts should be taken. If, for instance, the London and North Western Railway Company brought coals (say 100 miles) to the Chelsea Dock at Fulham at a shilling per mile, every mile earned a shilling. The earnings of the line were easily ascertained, no matter how the several companies contributed to its construction. A slight difficulty arose, however, from the fact that four companies used the same line, involving the consideration of four sets of accounts ; and in this particular case there was the further difficulty that, whereas two of the companies came down to the Fulham Dock, the other two com-

panies went on a higher level over to Clapham Junction. There was this complication also:—a man taking a ticket at Brighton for London would be taken either to London Bridge or Victoria for the same fare; but if carried on to Kensington, the portion of the fare earned on the West London line must be taken account of. The main question was the value of the dock. The large basin would, no doubt, be fully used some day, and the value of it be developed; and the question was how it was to be rated. The parish assessed the dock at £1,800; but the company contested the assessment, and the arbitrator dismissed the appeal, which was confirming the rate.

The CHAIRMAN said that, as it seemed to be the wish of the Meeting to resume the discussion at a later period of the Session, he would reserve any remarks he might wish to make for that occasion, and hoped that the Members would be prepared to enter fully on the consideration of the interesting topics brought under their notice in the useful and elaborate Paper which had just been read.

ON THE
VALUATION OF ANNUITIES AND
REVERSIONS DEPENDENT UPON TERMS
OF CERTAIN DURATION.

BY WILLIAM MATHEWS, JUN., MEMBER.

*Read at the Ordinary General Meeting of the INSTITUTION OF SURVEYORS
December 12th, 1870.*

RICHARD HALL, PRESIDENT, IN THE CHAIR.

THE valuation of an estate in perpetuity, depending, as it does, mainly upon the experience and judgment of the valuer, gives rise to comparatively few questions as to the method of estimation to be employed; but let the estate be divided into a terminable annuity and a reversion, and opinions the most divergent are entertained upon the right principles of determining the respective interests of the annuitant and reversioner. Nor is this merely a question of the relative merits of different routes to a common goal; a change in the method of procedure has very considerable influence upon the numerical results, and a more interesting subject for discussion could scarcely be selected than this most important branch of the business of the surveyor.

I do not propose to occupy your time with an investigation of the formulæ which form the basis of the tables of annuities and reversions dependent upon terms of certain duration. The mathematical principles involved in them are very elementary, they may be found in any ordinary school algebra, and are, doubtless, familiar enough to most of

those whom I have the pleasure of addressing. My object is rather to call your attention to certain difficulties attaching to the popular methods of applying the tables, and to offer some suggestions for the correction of those methods. Precisely the same difficulties occur in the calculations of interests depending upon the duration of life, but this very intricate division of the subject is beyond the scope of the present Paper.

In the construction of the formulæ to which I have referred, and in the tables deduced from them, the following conditions are taken for granted :—

First. That the rate of interest employed is that at which money can be invested to accumulate at compound interest, without trouble, expense, or risk, on the part of the investor.

Secondly. That the above rate is the same as that which a purchaser would expect to make of his money; or conversely, that a purchaser would be content with the same rate per cent. as that at which he could invest money to accumulate at compound interest.

It is obvious that Government securities are the only description of investment in which these conditions are fulfilled, and that in land, rent-charges, ground rents, houses, manufactories, in short, in every kind of property which falls within the province of the surveyor, circumstances more or less at variance with them are introduced. We have here another instance of the reproach often urged with so much justice against school mathematics, that of consisting for the most part of curious intellectual puzzles which have no immediate bearing upon the problems of practical life.

For clearness of ideas, let us consider a simple numerical instance of a very common case, viz., that of well-secured rent-charges in perpetuity. Suppose a person to be in possession of an income from such a source, amounting to

£100 a year in perpetuity, and to be desirous of selling it. Experience teaches us that a purchaser will expect to make 4 per cent from this description of investment, which is equivalent to 25 years' purchase, and a purchase value of £2,500.

Now suppose the possessor, instead of selling his property, to devise it by will, leaving an annuity for 10 years to A with remainder to B, and that at his death A and B wish to dispose of their interests. Upon what principle are they to be valued?

Many surveyors, I imagine, would answer this question by quoting the popular rule, *that the cumulative investments must be made in the same description of security as that from which they are derived*, in which case they will accumulate at the same rate of interest that the property would pay to a purchaser if he bought the perpetuity in possession. In accordance with this rule they would turn to the 4 per cent. tables and make the calculation as follows:—

	I.	£
An annuity of £100 for 10 years, is worth in present money, at 4 per cent.		811
£100 a year in perpetuity to commence at the end of 10 years, is worth in present money, at 4 per cent . . .		1,689
Value of perpetuity in possession . . .		<u>£2,500</u>

This calculation is distinguished by great neatness and simplicity. Let us endeavour to test its correctness.

First take the case of the reversioner.

By sitting still and doing nothing for 10 years, he will at the end of that time become possessed of a property of which the then market value will be £2,500. He parts with it for £1,689. What is he to do with the money? To put

himself in the same position as before, he must invest it to accumulate to £2,500 without trouble, expense, or risk to himself. Can he do so at 4 per cent? By no means. According to the popular rule, he must invest it in the same description of property as that to which he is entitled at the end of the 10 years' term. He buys rent-charges with it. He must either collect them himself or pay an agent to collect them for him. They are not paid punctually. He receives the first year's income some months after it is due. He must go into the market for other rent-charges worth precisely that amount; he must employ an expert to advise him that they are well secured; and this process must be repeated every year up to the end of the term. Evidently he has made a bad bargain, a change decidedly for the worse.

Next, take the case of the annuitant. He sells his interest at £811; upon which the purchaser must make 4 per cent. per annum, or £32·4, and get back his purchase-money when he loses his annuity.

	£
The annuity is	100
Interest on purchase-money at 4 per cent.	32·4
Sinking fund	£67·6

The sinking fund of £67·6 per annum, invested at compound interest at 4 per cent., will amount in 10 years, to £811, and reproduce the purchase-money at the end of the term. But can the purchaser invest his sinking fund at this rate of interest without trouble, expense, or risk? Just as impossible as before. He must be content with the current rate of compound interest, and at the end of the term will find himself deprived of a portion of his principal. The annuitant has made a good bargain, he has received too large a sum of money, and has obtained an advantage at the expense of the reversioner.

Tables founded upon a principle somewhat more rational than the one we have been examining, have found their way into modern collections. These show the price that a purchaser should give for an annuity, in order to obtain interest at one rate per cent. and reinstate the purchase-money at another.

The market rate of compound interest has for many years ranged from 3 to $3\frac{1}{2}$ per cent. For the sake of simplicity, I shall assume it to be 3 per cent., which will be sufficiently approximate for my present purpose.

Here it may be remarked, by the way, that a diminution in the rate of interest required increases the sinking fund in the case of an annuity, and the purchase value in the case of a perpetuity in possession, and, therefore, appreciates the present value both of annuity and reversion; on the other hand, a diminution in the rate of cumulative interest retards the accumulation of the sinking fund, and, therefore, depreciates the value of the annuity; while, since it does not affect the value of the perpetuity in possession, it appreciates that of the reversion.

Estimating the value of the annuity by the method just mentioned, and the value of the reversion in a similar manner, the calculation will stand as under:—

II.		£
The present value of an annuity of £100		
for 10 years, to pay the purchaser		
4 per cent., and reproduce the purchase-money by the investment of		
the sinking fund at 3 per cent, is .		
		786
The present value of the reversion, or the		
sum of money, which, invested at		
3 per cent. compound interest, will		
amount to £2,500 in 10 years, is .		
		1,860
Total	.	<u>£2,646</u>

and the sum of the separate interests is considerably more than the value of the property in possession.

Now, although an owner may easily diminish the present market value of his property by injudicious legal limitations, by no known process of legerdemain can he possibly make it worth more money by mere arrangements on paper; and whenever we find our figures leading to such a result, we may be sure there is some error lurking in the calculations. In the present instance, either the interest of the annuitant, or that of the reversioner, must have been over-estimated. Let us see if we can discover which.

The case of the reversioner is very simple. Without effort on his part, at the end of 10 years, he becomes possessed of a perpetuity of £100 a year, worth 25 years' purchase, or £2,500. That it really will be worth as much may reasonably be assumed, in the absence of any valid reason to the contrary; but this part of the question will be more fully discussed hereafter. To be placed in the same position, he must be paid such a sum of money as invested at compound interest at 3 per cent. will amount to £2,500 at the end of the term; and this we have seen to be £1,860. Subject to the truth of the assumption, no argument can be more conclusive.

To ascertain the position of the annuitant, we must first inquire how it happens that a purchaser expects to receive a higher rate of interest than he could obtain from Government securities. Manifestly to compensate him for the trouble, expense, and risk of the less eligible investment. The difference between the interest he requires and the Government rate, is, strictly speaking, not *interest*, but *compensation* or *insurance*. From the investment of £2,500 in Government stock, he would be content with £75 a year. From the investment of the same amount in perpetual

rent-charges, he would require £100 ; that is to say, he estimates the compensation at one-fourth of the yearly amount of the annuity, being the difference between 3 and 4 per cent. upon the purchase-money, that is, 1 per cent. on £2,500, or £25.

But suppose, instead of buying £100 a year in perpetuity, he buys it only for a term of 10 years. The value of this annuity, to pay 4 per cent. and reinstate the purchase-money at 3 per cent., is, as we have seen, £786. The excess of the interest required above the Government rate, or 1 per cent. upon the purchase-money, is £7·86. Instead, therefore, of being able to set aside for compensation £25 out of each year's income, which he ought to be, he can spare less than £8. Clearly he has given too much for the annuity. To place himself in the same position as if he had bought the perpetuity as 4 per cent., he should have calculated the annuity at £75 a year with interest at 3 per cent., and he would have found that its fair value was £640. At this price an annuity of £100 a year would pay 7 per cent. on the purchase-money, and reinstate it at 3 per cent. In other words, an annuity for 10 years to pay 7 per cent., and reinstate the principal, is an equally fair purchase with a perpetuity to pay 4 per cent. ; and it is evident that the shorter the term the higher the rate of interest that should be required.

It follows from the above considerations that the common practice of valuing an annuity to pay the purchaser a rate per cent., depending only upon the nature of the property involved and independent of the length of the term, is, as a general rule, an irrational proceeding ; and that a more correct method would be to ascertain in the first instance the value of the reversion, and deduct it from that of the perpetuity in possession, to find the value of the annuity.

Upon these principles we have :—

III.	£
Present value of £100 a year in perpetuity, to pay 4 per cent. . . .	2,500
Present value of £2,500, due 10 years hence, at 3 per cent. compound interest	1,860
Present value of annuity of £100 a year for 10 years	<u>£640</u>

These figures are confirmed by the following method of calculation, which is, indeed, the only satisfactory mode of conducting such an investigation.

Deduct from the yearly annuity a per-centage of the purchase-money reckoned at a rate of interest equal to the difference between that required for the perpetuity in possession and the current rate of compound interest, and calculate the present values of the reduced annuity and the reversion at the latter rate.

	£
Present value of reduced annuity of £75 for 10 years, at 3 per cent	640
Present value of reversion to £75 a year at the end of 10 years, at 3 per cent.	<u>1,860</u>
Value in possession of £75 a year for ever, at 3, or £100 a year for ever at 4, per cent.	<u>£2,500</u>

Let us briefly review the ground over which we have now passed. We have seen that, according to a popular rule, the present value of a rent-charge of £100 a year for 10 years would be estimated at £811. We have seen that this valuation depends upon the fallacious notion that the investments to reproduce the principal could be made at a rate higher than the current rate of compound interest, and that, by introducing the correction that they shall be made at the current rate, the present value of the annuity becomes

reduced to £786. We have seen, also, that both these results are affected by a second fallacy, equally irrational with the first, viz., that an annuity ought to pay a purchaser the same rate per cent. whatever its duration, and that, when this is corrected, the value of the annuity is still further reduced to £640; so that each error benefits the annuitant to the disadvantage of the reversioner. And, lastly, that the proper method of valuation is to subject the annuity in the first instance to an easily ascertainable reduction, and then apply the tables at the current rate of compound interest.

We will now discuss the question reserved for consideration, viz., the ground we have for assuming that the value of the perpetuity will be the same at the expiration of the term that it is at the present time. In the very simple case we have been examining, the yearly income is, from its nature, insusceptible of increase, and is supposed to be sufficiently well secured to be insusceptible of diminution. If any variation take place it can only be in the number of years' purchase, which will depend upon the market rate of interest, and will influence both secured rent-charges and Government stock. Our question, therefore, becomes reduced to this,—What guarantee have we that the market rate of interest, neglecting temporary and accidental fluctuations, will be maintained unchanged for any given period? Now, the value of the property in possession, the starting point of the whole calculation, obviously involves the assumption that a certain average rate of interest will obtain for a considerable number of years; and, in supposing that it will obtain at the end of the given term, we are introducing no new element into the problem. A variation in the rate is one of those contingencies inseparable from every bargain between vendor and purchaser, of which each party must take the risk.

An unforeseen diminution of the rate of interest will prejudice the vendor and benefit the purchaser both of annuity and reversion, and an unforeseen increase in the rate will have the opposite effect; but, in a country where the accumulation of capital is more rapid than the extension of the field for its employment, the tendency in the long run will be in the former rather than in the latter direction.

In the foregoing remarks I have limited myself to the case of a fixed and well secured annuity, for the purpose of discussing a question of method in the simplest form in which it can be presented. I now pass to the examination of cases of greater complexity, in which the annuity is the full annual value of the property from which it is derived, and in which the property itself is liable either to decrease or increase in value.

As an instance of the former class, take the case of a house of which the net annual value, after making proper allowances for outgoings and repairs, is £100. Suppose that the value of the site is so small that it may safely be neglected, and that the purchase value is £1,666, being at the rate of 6 per cent.

Let us now calculate the present values of a 10 years' annuity and of the reversion, by methods similar to those employed in the previous part of this Paper.

I.	£
The present value of £100 a year for 10 years, at 6 per cent., supposing the sinking fund to accumulate at the same rate, is	736
The present value of £1,666 due at the end of 10 years, reckoning compound interest at 6 per cent., is	930
	£1,666

II.		£
The present value of £100 a year for 10 years, at 6 per cent., supposing the sinking fund to accumulate at 3 per cent., is		679
The present value of £1,666 due at the end of 10 years, reckoning compound interest at 3 per cent., is		1,240
		£1,919
III.		£
The value of the property is		1,666
The present value of the reversion by last case		1,240
Leaving for the annuitant only		£426

Discarding the second calculation as obviously unsound for the reason previously stated, and comparing the first and the third together, we have respectively £736 and £426 as the value of the annuity, and £930 and £1,240 as that of the reversion. The differences are so large that it is surprising that instructed persons can be found, of whom some take the one view and some the other, and yet I have heard both urged by surveyors with much plausibility, according to the bias their judgments had received from the interests of their clients.

In the case of a fixed perpetual annuity it has already been shown that the first method of calculation gives a fallacious result, and the third method a true one. In the case under consideration the third method is not necessarily correct, as we are no longer justified in assuming that the property will maintain its purchase value at the end of the term of the annuity. Even under the most favourable covenants as to repair, a house in the nature of things is a perishable article, and must wear out sooner or later.

The depreciation in the annual value of the house may be gradual, or it may be sudden. In order to avoid needless refinement, I shall assume that it will be sudden, and that the preliminary allowance for repairs will be sufficient to maintain the rental of £100 a year during the whole existence of the house. This assumption is not strictly accurate, but it is sufficiently approximate for practical purposes.

We will now treat the problem by the method of deductions. Three per cent. upon a purchase-money of £1,666 is £50, so that of the annual value of £100 a purchaser would reckon £50 for interest and £50 for compensation and insurance. As the annuity is the full annual value of the property, the risk of loss on the rent is far greater than in that of a secured rent-charge, and the purchaser would not now be satisfied with a margin of 1 per cent. as a compensation for this risk, and other contingent disadvantages. The allowance in any given case must depend on the judgment of the valuer. We will take it here at 2 per cent.

We have then :—

	£	£
Annual value		100
Consisting of—		
Interest	50	
Compensation for loss of rent and contingent disadvantages .	33·3	
Insurance against depreciation .	16·7	
		£100

with this important proviso, that the second item only is a deduction from the income of the annuitant, the provision of the insurance fund being an obligation on the reversioner. The purchaser of the annuity can thus reckon upon a clear interest of 66·7, and the calculation becomes :—

	£	£
The present value of £50 per annum for 10 years, at 3 per cent., is	426	
The present value of 16·7 per annum for 10 years, at 3 per cent., is	143	
Value of annuity . . .		569
The reversion to £50 a year at the end of 10 years, is worth in present money, at 3 per cent.	1240	
Out of which has to be provided £16·7 per annum for 10 years, worth in present money, at 3 per cent	143	
		1,097
		£1,666

The proper amount of the annual sinking fund, to reproduce the principal when the house is worn out, will depend upon the probable duration of the building. In this instance, the sinking fund, taken at 1 per cent. of the purchase-money, is equivalent to a duration of 47 years,—the interval in which, at 3 per cent. compound interest, £1 per annum, would accumulate to £100. If the probable duration be longer, the annual sinking fund will be less: £ $\frac{1}{4}$ per annum would accumulate to £100 in 87 years, £ $\frac{1}{5}$ in 94 years, £ $\frac{1}{6}$ in 100 years.

If we are dealing with a recently erected house, and the term of the annuity be a short one, the annual cost of repair will be greater to the reversioner than to the annuitant, and this circumstance must be taken into consideration. Suppose the repairs to be provided for out of a rent of £100 a year, and the purchase value to be still £1,666, the probable duration of the house being 94 years, so that the

sinking fund is £·2 per cent., or £3·3. Suppose, moreover, that the average repair fund is £15, the £100 will be made up as under:—

	£
Interest	50
Repairs	15
Sinking fund	3·3
Compensation and contingencies . . .	31·7
	£100·0

If the repairs during the term of the annuity are likely to average only £5 a year instead of £15, the annuitant may appropriate as interest £10 of the repair fund, as well as the sinking fund of £3·3, and the annuity to be capitalized will be £63·3.

The calculation may be simplified by confining our attention to the position of the annuitant; by deducting from the rent a fair proportion, first, for compensation and contingencies; secondly, for repairs, having regard solely to the period during which his interest will continue, and by treating the remainder of the rent as the real annuity. For instance, suppose a house producing a rental of £100 a year to be worth 18 years' purchase, or £1,800, and the term of the annuity to be 10 years:—

	£	£
Rent		100
Deduct for compensation and contingencies $1\frac{1}{2}$ per cent. on £1,800, being $\frac{1}{2}$ per cent. more than in the case of a secured rent-charge . . .	27	
For repairs, 5 per cent. of the rent	5	
		32
Real annuity		£68

	£
The present value of £68 per annum for 10 years, reckoning interest at 3 per cent., is	580
Leaving for the reversion	1,220
	£1,800

This method is applicable to any conceivable case of terminable and reversionary interests in building property.

We have, finally, to examine that class of securities where the property tends to increase instead of to decrease in value, of which the highly important commodity of land constitutes the subject-matter.

Suppose a block of land to be producing a net rental of £100 a year, and to be worth in the market 40 years' purchase, or £4,000, upon which the rental would pay interest at the rate of $2\frac{1}{2}$ per cent., and that it is required to find the present value of a 10 years' annuity and the reversion. The three calculations, similar to those employed in the previous cases, will stand as under:—

I.	£
The present value of £100 a year for 10 years, at $2\frac{1}{2}$ per cent., supposing the sinking fund to accumulate at the same rate, is	875
The present value of £4,000 due at the end of 10 years, reckoning com- pound interest at $2\frac{1}{2}$ per cent., is .	3,125
	£4,000

II.

The present value of £100 a year for
10 years, at $2\frac{1}{2}$ per cent., supposing

the sinking fund to accumulate at	£
3 per cent., is	891
The present value of £4,000 due at the	
end of 10 years, reckoning com-	
pound interest at 3 per cent., is .	2,976
	£3,867

III.	£
The value of the property is . . .	4,000
Present value of reversion by last case .	2,976
Leaving for the annuity . . .	£1,024

Owing to the small difference between the rates of interest, the differences in value are here inconsiderable, and, as might have been anticipated, they have a contrary direction to those in the last case.

Each of the three calculations is affected by the erroneous assumption that the purchase value of the property will be constant. A purchaser, by investing £4,000 in Government securities, could obtain an income of £120 a year. By investing in land, he is satisfied with £100. Why is he content to lose £20 a year? Obviously because he knows that the property he purchases will increase in value, and that in the long run he will recoup himself for his present sacrifice of income.

In so short a term as 10 years the annuitant could scarcely expect to reap any share of the increase in value, and the calculation takes the following very simple form—

	£
The present value of £100 a year for 10	
years at 3 per cent., is	853
Leaving for the reversioner	3,147
	£4,000

If the term of the annuity is sufficiently long to enable the annuitant to secure a share of the increased value of the property, this circumstance must be taken into account. The average annual revenue yielded by the property in perpetuity is supposed to be £120, and the valuer has a margin of £20 to deal with. He may consider that the annuitant, in his 10 years' term, could make an average income of £105. In this case the calculation would become :—

The present value of £105 a year for 10	£
years, at 3 per cent., is . . .	896
Leaving for the reversioner . . .	3,104
	£4,000

Or, the investigation may be conducted in the following manner :—

The present annual value of the property is £100, which would pay 3 per cent. upon a principal sum of £3,333. A purchaser of the perpetuity at £4,000, would reckon that he would receive interest only upon £3,333, and would consider the remaining £667 as a payment in respect of a prospective future advantage. If no part of this advantage accrues during the term of the annuity, the present value of the reversion will be found by adding £667 to the present value of £3,333, due at the end of the term :—

The present value of £3,333 due at the	£
end of 10 years, at 3 per cent., is .	2,480
The present value of the prospective	
advantage is	667
Present value of reversion	3,147
Leaving for the annuity	853
	£4,000

which agrees with the previous calculation.

If any part of the prospective advantage is likely to arise during the term of the annuity, the £667 must be divided between annuitant and reversioner, according to the discretion of the valuer.

It may happen that an annuitant is unable to appropriate the part of the prospective advantage which would naturally accrue during the term of the annuity, because the term itself artificially prevents the advantage being developed during that period. A property so situated has obviously a smaller value in present money than a property, identically the same in other respects, but free from such a limitation. In the former case, the interests of annuitant and reversioner are together less than the value in possession. The difference between them constitutes what is known as a *dormant interest*, which may at any time be awakened by the purchase by the reversioner of the interest of the annuitant, or *vice versâ*.

There are certain descriptions of landed property which can be bought to pay a higher interest than that afforded by Government securities, but which, nevertheless, increase in value. Building land in a prosperous town is an instance of this description. Suppose a block of building land of the present annual value of £100 which could be bought at 20 years' purchase, to pay 5 per cent., if its value were stationary, but for which, in consequence of prospective improvements, 25 years' purchase can be obtained, being at the rate of 4 per cent. only. The total purchase-money is £2,500, of which £2,000 produces interest, and £500 is a payment for prospective advantage: of the annual value of £100, £60 is interest, being at the rate of 3 per cent. on £2,000, the remaining £40 is compensation. If no part of the advantage accrue during the term of the annuity, the calculation is:—

	£
The present value of £2,000, due at the end of 10 years, at 3 per cent., is .	1,488
Present value of prospective advantage .	500
Present value of reversion	1,988
Value of annuity, £60 a year for 10 years, at 3 per cent.	512
	<u>£2,500</u>

If any part of the prospective advantage is likely to accrue during the term of the annuity, the £500 must be equitably apportioned between the annuitant and reversioner.

We have now examined the three cases in which the value of the property is fixed, diminishing, progressive. It remains to point out that the subject-matter for valuation may consist of any one of these three descriptions of property or of any combinations of them. In the latter case it must be divided into its constituent elements, and each element treated by the method appropriate to itself.

MR. H. CRAWTER (Member) had much pleasure in asking the Meeting to accord a vote of thanks to Mr. MATHEWS for his very able and elaborate Paper. It dealt with a subject of such high professional importance, that justice could scarcely be done to it in a discussion this evening. Personally, he felt that it would be presumptuous to speak upon the subject at the first hearing of the Paper. He hoped, therefore, that some Member would propose an adjournment of the discussion to a future Meeting.

MR. E. RYDE (Member), in seconding the proposition of thanks to Mr. MATHEWS for his very clever Paper, said he had no doubt the calculations were strictly accurate (mathematically) throughout; it was the practical application of

the principle, however, which would have to be discussed. Perhaps the most frequent questions which arose were as to the value of the entirety when the leasehold interest and the reversion were in the hands of different parties, one or both of whom were unwilling to sell. On this point he feared he should be unable to agree with the theory enunciated in the Paper. He gathered that the feeling of the Meeting was that there should not be a full discussion at present, and he would, therefore, conclude by moving its adjournment to a future evening.

Mr. E. J. SMITH (Member) said he should have had no hesitation in seconding the vote of thanks if it had not been well known that the subject was one on which he had a decided opinion. The motion, therefore, came with a better grace from those who were less partisans than he might be thought to be. It was not proposed to enter this evening into the discussion of the subject, but he should, perhaps, aid in considering it if he mentioned three historical facts.

The first was one which had been under his observation for the last 24 years. In the year 1840, the Corporation of the City of London had an estate of houses, producing an income of £47,500 per annum, held upon an ordinary leasehold term of 99 years, of which 27 years were then unexpired, and an Act of Parliament was necessary to enable the Corporation to purchase the reversion. The annual value for sale being taken at £47,500, the fee simple value was taken at 16 $\frac{2}{3}$ years' purchase, and the value of the reversion was estimated by Mr. ARTHUR MORGAN, of the Equitable Office, on the 6 per cent. tables (at that time the invariable mode of estimating such reversionary interests), at 3.3 years' purchase, which came to £156,750. The Bill was introduced into the Upper House in the year 1840, and passed through it. It went down to the House of

Commons, and the then Assistant Secretary of the Ecclesiastical Commissioners, somehow or other, caused the Bill to be stopped, the Act was not obtained, and the reversion, by Act of Parliament, became vested in the Ecclesiastical Commissioners. Years passed on. The Assistant Secretary became the Secretary, and, notwithstanding the exertions of the lessees, that estate in its entirety fell into possession at the end of the leasehold term, viz., in the year 1867. Now, it had been proposed to sell the estate in 1840, and the price of the reversion had been fixed at £156,750. That sum invested in consols at compound interest, for 27 years, would come to about £400,000, the interest of which, at 3 per cent., would be £12,000 a year. When that estate came into possession (whether owing to the improvement, in the interval, of estates in the City generally, or to other causes,) the same Secretary assisted in granting, out of the income arising from the estate, augmentations of the stipends of poor clergy, *for ever*, with safety (for so considerable was the margin that it was perfectly safe) to the extent of more than £36,000 a year; instead of having £400,000 consols, or an income of £12,000 a year, the Ecclesiastical Commissioners had such an income as enabled them to grant more than £36,000 a year, *for ever*,—more than thrice the proceeds which the Commissioners might have obtained under a sale in 1840 on the terms then agreed.

The second case came within his own experience; and he hoped Members would excuse him if, in speaking of his personal experience, he seemed to speak of himself. In the year 1847 he was appointed one of the surveyors of the Ecclesiastical Commissioners; and, at that time, it was the practice of the Commissioners to have the annual and fee simple values of their estates estimated by the surveyors, and for the actuary (Mr. A. MORGAN, of the Equitable Life Office,) to divide the two interests. He (Mr. SMITH) very soon saw that the pains taken by the surveyors in

estimating the annual and fee simple value were of very little use; because, the division of the fee simple between the two interests was incorrectly made: so he sent in a report to the Board, pointing out what he thought to be the foundation of the evil; and, to his surprise (being then a junior), he found that the report was considered, and he heard no more of it. However, more experienced people told him that, in a case of that kind, if he escaped defeat he achieved a victory; and, accordingly, some time afterwards there came an order from the Board that the surveyors, in addition to estimating the annual and fee simple value, should also divide the fee simple between the two interests, and that has been the practice ever since. One of the first changes was, instead of dividing the interests in houses valued in fee at $16\frac{2}{3}$ years' purchase upon the 6 per cent. table, to take—not in every case, but as a general principle—4 per cent. discount of the fee simple value as the value of the reversionary interest; and, if the leasehold interest was purchased, to take 4 per cent. discount upon the value of the fee simple and give the lessee the difference; which, of course, was unsatisfactory to the lessee. But there were a good many transactions, and the practice began to prevail. In 1856 there was an investigation in the House of Commons into the proceedings of the Ecclesiastical Commissioners, and then the lessees of houses gathered up their forces and stated that their interests were being sacrificed in a most unsatisfactory manner. Two gentlemen stated that they held £25,000 per annum of leasehold houses; that the system was injurious to their interests, and would, if carried out over the whole of the church house property, give to the church £858,858, which ought to go to the lessees. In the report of the Committee of the House of Commons in 1856, it would be found that this story occupied 60 pages; 30 of attack and 30 of defence. Two eminent surveyors and two eminent actuaries were brought

forward, and wrote opinions in the most distinct terms that the several interests in 6 per cent. estates should be divided on the 6 per cent. table. The Committee of the House of Commons occupied several days over the point, but ultimately determined not to interfere; and again it was felt that if defeat were escaped, victory was achieved. Since that time, though an Act passed in 1860 enabling any person aggrieved to call in the opinion of an arbitrator appointed by the Home Office, there had been scarcely a case of arbitration, and he did not think there was any surveyor who was prepared to contend that the division on the 6 per cent. table was the true principle of division in cases where corporations were owners; because he had heard the opinions of many surveyors, that where a corporation was owner, and could readily invest only in consols, it was fair in that case that the reversion should be taken on the 4 per cent. table. He had been satisfied to take that opinion from eminent surveyors.

The third case would take but a very short time. In the spring of 1869, Mr. FOWLER, of Sheffield, was concerned in the sale, to a railway company, of reversions of houses worth some £3,000 or £4,000 per annum. He took the same views as their friend, Mr. MATHEWS, had been so good as to put before them, and he (Mr. SMITH) was called in, as an expert, to support those views; but before he was called in, the umpire had been chosen; and, though they gave their evidence, they knew perfectly that they had not the slightest chance of a decision in their favour; for the umpire had been going on the opposite system for 30 years, and could not change and stultify all he had ever done. The accuracy of the theory propounded by Mr. MATHEWS was established by practical experience for the last 30 years; and, although no objection would be taken to the Metropolitan Board of Works, or a railway company, (purchasing under compulsory powers,) overpaying

the leaseholder's interests, he had no doubt the discussion on the Paper would be most interesting.

Mr. EDWARD SMYTH (Associate) said that, in his very excellent Paper, Mr. MATHEWS had developed, in a most practical manner, an idea which was, however, not exactly new, namely, that the differences in the fee simple values assigned to various kinds of property nominally producing the same income could be made, perhaps more naturally, and certainly not more arbitrarily, by equivalent reductions of the nominal annual values; a course which might have precluded the questions that have arisen as to the rate of interest to be adopted in an equitable calculation for the enfranchisement of leasehold house property. Accordingly, in pursuing the subject to the case of a person in possession, for a term of years, and one in remainder, Mr. MATHEWS took what might be called the *secure* annual value appropriate to each, and applied to it the years' purchase indicated by the current rate of interest for a secure investment in the funds. This seemed to be the just method, *provided* it is intended that it should be adopted only in a voluntary dealing between the two parties. Doubts as to its suitability to such a case would, perhaps, be lessened if its inapplicability to the case of a stranger's purchase of either interest, with the prospect of continuing it as a separate investment, were considered. Here the method would give an excessive value for each interest. In the case of the leasehold, the secure annual value would require to be further reduced as a compensation for the disadvantageous restrictions to which the lessee is subjected, but from which an owner in fee simple in possession is free. The value of the reversion would also be excessive. It was not that he (Mr. SMYTH) relied upon the common statement that the purchaser of a reversion "locks up" his capital; for he might expect to be able, if necessary, to re-sell at

about the same rate at which he bought, and therefore the expression "lock up" lost its force. But there were circumstances connected with any such re-sale, which should prevent even the most sanguine valuer of a mere reversion to real property (however well secured) from viewing it in the same light as an investment in immediate bank annuities. If a man acquired Government stock, he knew that to realize it he had only to go to a great centre for the supply of wants,—the Stock Exchange,—and there, with the smallest possible expenditure of time and money, he could easily find a purchaser at a full price. But if he invested in a reversion to real property, he knew that should he need to re-sell it, he would have to pay a far higher commission for the sale, and perhaps heavy legal expenses for completing the transfer; the whole process was slow, and the number of competitors brought together very limited. No doubt an allowance for these drawbacks to real property must be considered as already made in the fee simple value; but, in discounting this value at the current rate of interest, only such part of it would be taken, and, therefore, only such part of the allowances entering into its composition, as are applicable to a period that does not commence for some years to come. It, therefore, remains to make an allowance for these disadvantages attaching to the investment during the intervening period; and for this reason a separate reversion to real property could never be calculated at the low rate of interest of the funds, but at a higher rate varying according to the probable difficulty and cost of re-selling the reversion of the particular property if requisite. The total values of the two interests regarded as separate investments would therefore fall short of the value of the fee simple; but if the parties themselves, seeing that they were damaging each other's interests, agreed to merge them into one, the burdensome restrictions which depreciated the leasehold term, and the

disadvantage attending a sale of the reversion, alike disappeared, and therefore with them may also disappear the special allowances made for each, and there remained only the elements of the calculation which Mr. MATHEWS offered for adoption.

In his calculations, No. 2, Mr. MATHEWS had quoted certain modern tables in a way which need not, however, be considered to disparage the tables themselves. They have been constructed upon an assumption, made in tables generally, that the person using them will have a care as to the nature of the income to which he applies them ;—it might be a perfectly secure annuity, or an income from poor house property. The tables did all that they professed to do, and nothing more. They were introduced by the late Mr. PETER HARDY, who wrote an elaborate work on *Annuities Certain*, and was a gentleman of such signal ability, that the Institute of Actuaries had gone so far out of its way as to raise a not insignificant sum for a memorial of him. He (Mr. SMYTH) hoped it would not be on any one's mind, that because Mr. HARDY introduced these tables, he would therefore have made the laughable calculation Mr. MATHEWS had purposely set out, for this would be an absurdity still greater than that which is exhibited in the calculation itself.

The vote of thanks having been passed,

Mr. MATHEWS thanked the Meeting for the manner in which his Paper had been received. All that he endeavoured to do was to place in as clear a light as he could the great difference of opinion existing among surveyors on this important subject. He had raised the issue, he believed, in a clear form, and he trusted that they would ultimately arrive at the truth of this much-debated question.

The further discussion of the Paper was then adjourned.

A DISCUSSION
ON THE
PROPOSAL FOR MAKING OWNERS
LIABLE TO THE PAYMENT OF A
PROPORTION OF LOCAL TAXATION.

OPENED

BY EDMUND RUSHWORTH, MEMBER.

*At the Ordinary General Meeting of the INSTITUTION OF SURVEYORS,
on Monday, January 16th, 1871.*

RICHARD HALL, PRESIDENT, IN THE CHAIR.

It appears by parliamentary reports that the local rates and taxes, in the metropolis alone, amounted in the year 1867 to upwards of £3,000,000, and in England and Wales to £16,783,220. If any material alteration be made in the mode of levying this large amount, it is evident that existing arrangements between landlord and tenant would be seriously affected, and I am sure, therefore, I need not apologize for bringing the subject under your notice.

It has occurred to me that the most convenient method of doing this will be to call your attention, as briefly as I can, to some of the evidence given, and the arguments used with reference to the proposal for making the owner of house and landed property pay a proportion of the local taxation now levied almost exclusively on the occupier.

This will, it seems to me, be a better way of raising a discussion on the general principles involved, than the

reading of an essay to enunciate any personal opinion I may happen to hold on a special branch of the subject.

The success of the property tax (which is paid entirely by the owner, notwithstanding any previous arrangement that the occupier should pay all taxes and rates, whether parliamentary or parochial,) probably encouraged Mr. GOSCHEN to move for a Select Committee of the House of Commons, to enquire whether the burden of local taxation on land and buildings might not equitably be divided between the owner and occupier.

The Select Committee of the House of Commons on Local Taxation, appointed in pursuance of Mr. GOSCHEN's motion, reported on the 15th July, 1870 (*inter alia*):—

(c) “That in any reform in the existing system of local taxation, it is expedient to adjust the system of rating in such a manner that both owners and occupiers may be brought to feel an immediate interest in the increase or decrease of local expenditure, and in the administration of local affairs.”

(d) “That it is expedient to make owners as well as occupiers directly liable for a certain proportion of the rates.”

(e) “That subject to equitable arrangements as regards existing contracts, the rates should be collected, as at present, from the occupier (except in the case of small tenements, for which the landlord can now by law be rated), power being given to the occupier to deduct from his rent the proportion of the rates to which the owner may be made liable, provision being made to render persons having superior or intermediate interests liable to proportionate deductions from the rents received by them, as in the case of the income tax, with a like prohibition against agreements in contravention of the law.”

(7) “That whilst it is necessary to make provision for

limiting, as far as practicable, the disturbance of existing contracts, it would be on many grounds undesirable, and almost impracticable, to extend the exemption of property held under leases from the operation of the proposed changes until the expiration of such leases."

(9) "That the difficulties of the case would be equitably met by exempting the owners of property held under lease from the proposed division of rates, for a period of three years, and by providing that after the expiration of that time, the occupiers of that property should be entitled, equally with all other occupiers, to deduct from the rent the proportionate part of the rates to which the owner may become liable, power being given to the owner at the same time to add to his rent a sum equivalent to the like proportionate part of the rates calculated on the average annual amount of the rates paid by the occupier during the three years above referred to."

The following are a few notes of the evidence taken before the Select Committee:—

Mr. HENRY ARTHUR HUNT considered that "ground landlords had already paid their share of such local taxes as were then in existence in the diminished ground rent which they obtained, in consequence of the existence of such taxes having been used by the builder, as his reason for not giving more ground rent, as the liability for payment of such rates would decrease the rent he could obtain for the building, when erected.

"The freeholder, in effect, said the value of the house is due to the site, and if there were no rates and taxes he would require more ground rent.

"If the local taxation were taken off altogether the owner of the land would put it upon the price of the land, and the occupier would not be benefited."

Sir SYDNEY H. WATERLOW (Chairman of "The Improved Industrial Dwellings Company") said, "there is no doubt that when a building lease is taken, the landlord does get less ground rent if the rates are very high."

Mr. CLARE SEWELL READ, M.P., (a Norfolk tenant farmer,) said, "I believe that if the owner of land had to pay half the local rates he would be sure to recoup himself, whenever there was a re-arrangement of the rent. In all probability he would make it safe in this way: I believe the average rates are about 3s. 4d. in the pound in England and Wales, and if the owner were to pay half, viz., 1s. 8d., he would say to the occupier, in order to make himself safe, 'I shall charge you 2s.,' and he would get it on land—I do not say on houses.

"The competition for land is such that the owner would be able, if there were an increase of rates, to throw it entirely upon the occupier.

"The owner takes very little interest about the rates, he is not so much interested in them as the occupier.

"I prefer charging half the rates upon the income tax to charging half the rates upon the 'owners' of land, as every one ought to contribute according to his ability, mortgagees included."

Mr. ELIAS PITTS SQUAREY (surveyor and a tenant farmer,) said, "the poor rates on land are paid obviously by the tenant, but they are borne ultimately by the landlord.

"I think the tenants would be pleased at a division of the rates, as in the event of increased expenditure by the county board, the landlord would share the payment."

Mr. JAMES CAIRD (a Tithe Commissioner) said, "In Scotland the poor rate is divided equally between the owner

and occupier, and is collected one half from each, and I think the same system could be advantageously introduced into England, and would give the owner a greater interest in the rating."

He admitted that on a re-adjustment of rent of land in Scotland, the whole of the rates do practically go in diminution of rent.

Sir JOHN THWAITES (Chairman of the Metropolitan Board of Works) considered, that if the metropolis generally was benefited by better sewerage, purification of the Thames, embellishments such as the Thames embankment and improvements generally, it was a hard case to charge the occupier wholly with the expense because he happened to have agreed many years ago to pay every rate and tax, and therefore he thought that as the owner benefited in reversion by obtaining an increased rent, he should now bear part of the increased local taxation.

He would cast part of the local rates upon the ground landlord because he benefited in reversion, but admitted it would be unfair to tax "a tenant for life" of ground rents, who has no reversion.

He added that the occupier for the time being should pay half of the local rates; and that the owner's half should be apportioned among the respective persons who make up the "owner," like the property tax, which reaches ground landlords and mortgagees.

Mr. THOMAS AVERY (late Mayor of Birmingham) said, "At the time of letting property on lease, the actual amount of rates is an element in the contract; they, therefore, come out of the owner's pocket, and the additions to those rates come out of the occupier's pocket till a re-adjustment takes place."

Mr. R. DUDLEY BAXTER said, "The received doctrine in political economy was, that the rates fell on the occupier. ADAM SMITH says that the building rent is the interest or profit of the capital expended in building the house, and is regulated by the ordinary interest of money.

"The rates must necessarily fall upon the occupier, because, if they reduced the rate of profit below the average rate of profit in the trade, there would be a cessation of the supply of houses, and the demand would increase till the rents rose up to the point in which it was thrown upon the occupier."

He admitted, if farms were put to competition, the occupiers would bid with reference to the amount of rates to be paid by them, and, therefore, the rates would come out of the pocket of the owner.

He thought, that if mortgagees should be charged a portion of the local rates, according to the amount of the interest received (as in the property tax), it would lead to their demanding a higher rate of interest.

Putting local rates upon the owner would, in the long run, lead to an increase of rates and an increase of the taxation upon land and real property.

He added that, as the rents of land are generally below the annual value, an attempt to cast half the local rates upon the owner would lead to his having his farms re-valued, which would tend to the disadvantage of the occupier instead of to his relief, as the increased rent would more than counter-balance the relief in rates.

The above quotations will serve to indicate the general character of the evidence given before the Select Committee.

It appears to me that the views of those who argue in favour of the proposal are :—

First. That it will give the owner a direct interest in local taxation, and induce him to attend the local boards.

Secondly. That, as respects improvement rates, occupiers should not bear the whole burden, since in yearly tenancies, or short leases, the owner benefits in a much greater degree than the occupier, who only enjoys the improvement for a limited time.

The opponents of the proposal maintain, on the contrary,

First. That the right of free contract between owner and occupier will be interfered with ; and that there are very few owners or occupiers in the metropolis desirous of being fettered in the manner proposed.

Secondly. That if you force owners of London property to a frequent re-adjustment of rent, it must lead to their granting short leases, thereby discouraging outlay by occupiers ; and in respect of premises used for trade, keeping the occupiers in constant uncertainty, to the manifest injury of their business.

Thirdly. That owners of property in London are, generally, capitalists, not living on the spot, and quite willing to leave occupiers (who have the local knowledge) to attend the boards, as at present.

Fourthly. That assuming, on re-letting, the owner succeeds in adding to the rent an annual sum equal to the burden cast upon him, the so-called "gross annual value" will be increased by that amount, and the imperial taxes, such as income tax and house tax, will be charged upon that increased "gross annual value," unless care is taken to provide for altering the present method of assessing it.

Fifthly. That if the owners are not able to cast the burden back upon the occupiers in the shape of increased rent, it follows that the owners will be mulcted in an increased

property tax of about 2s. in the pound, whilst the fundholder and other persons, not owners of land or houses, will go free.

Sixthly. That an increase of permanent burdens will diminish the number of years purchase for which the property will sell, for example :—

	£
A house is held for upwards of 80 years, at a ground rent of, per annum. . . .	2
If the Legislature charges the owner with half the local rates, say half of 4s. in the pound, and the gross annual value is assessed at £300, it follows that the property is burdened with an extra annual payment of 2s. in the pound, viz.,	30
Total . . .	£32

It has thus lost one great attraction to the capitalist, who will probably offer one, or perhaps two, year's purchase less than he would have done had the burden remained at the almost nominal annual sum of £2, notwithstanding that he has the chance of adding that increased burden to the rent.

The questions therefore which I would venture to submit to the Meeting are—

1st. Will the proposed alteration affect the saleable value of landed and house property?

2nd. Is it desirable to interfere with the present right of free contract between owner and occupier?—as in granting a 21 years' lease, at a fixed net rent, the owner is now content to run the risk of losing income from any increase in the annual value—and the occupier is content to run the risk of any fluctuation in the rates during that term.

3rd. Will the proposed alteration benefit the occupier?—seeing that the owner, when re-letting, will have the power to defend himself from any decrease in his income, by raising the rent.

4th. Will the proposed alteration benefit the owner?—who is very frequently a mere tenant for life, and in many instances is in the receipt of ground rents of house property let beyond the term of his natural life, thus precluding him from any benefit arising from local improvements.

5th. Will not owners feel aggrieved at the constant alteration in their incomes, owing to the fluctuation in the rates?

6th. Should the proposed measure be carried, will it not fall unfairly upon income derived from land and houses, and exempt all other incomes derived from the funds, shares, &c., and which the income tax now reaches?

Lastly. Is there any force in the argument, that because some local rates are divided equally between owner and occupier in Scotland, they should be so divided in England?

I submit that Scotland is, in comparison with England, a poor country, rendering the collection of rates from the occupiers, in many districts, very difficult; and although in London the owner of houses under £20 a year is compelled to pay the rates—what might be desirable in Bethnal Green would be totally unnecessary in Belgrave Square.

Mr. J. W. PENFOLD (Hon. Sec.) said, that as Members no doubt recollected, the system of levying a portion of the local taxation on the owners as well as the occupiers had obtained in Scotland for many years, and MESSRS. T. BUCHAN, of Dundee, T. BINNIE, and T. D. SMELLIE, of Glasgow (Members of the Institution), Mr. DAVID MACGIBBON, of Edinburgh, Mr. W. BLACKWOOD, of Peebles, as also a

large proprietor in Rosshire, had kindly forwarded to him some information on the subject, a part of which, by permission of the President, he would lay before the Meeting.

POOR.—The most important of the rates were, of course, those for the sustentation of the poor, including the erection of poor-houses, lunatic wards, &c. Prior to 1845, these rates were levied, for the most part, on the inhabitants of a parish by a per-centage on their “means and substance,” having regard to their income, from whatever source derived; so that in towns and burghs the tax was a personal charge, and not attachable to land in any way. In country parishes a voluntary assessment was often made, paid partly by owners and partly by occupiers. The Scotch Poor Law Act of 1845 abrogated previous usages, and empowered parochial boards to levy assessments in either of the following modes, viz. :—(1) One-half on owners, and the other half on occupiers, according to the annual value of the lands and heritages owned and occupied by each respectively; or, (2) One-half upon owners, according to such annual value, and the other half upon the inhabitants, according to their means and substance other than lands and heritages; or, (3) An equal per-centage upon the annual value of all lands and heritages within the parish, and upon the estimated annual income of the whole of the inhabitants from means and substance other than lands and heritages. At Dundee and other places, the second mode was adopted. By the Poor Law Amendment Act of 1861, the first of the three was declared to be the only competent mode of assessing, and with some trifling exceptions is now followed throughout Scotland. In Dundee there seems to be still an opinion that the second mode is the most equitable. In Glasgow the third method seems to find favour, though it is admitted to be difficult to work.

In the assessment for rates under this head, a deduction for repairs, insurance, &c., is allowed from the gross or rental value of the property.

The following rates are levied on the gross rental :—

HIGHWAYS.—The construction of roads and bridges, and the repair of extensive damage (of an estimated amount of £500 or upwards), are paid for by the owners. In the country the maintenance is paid by a rate on the rental—in some cases one-half on owners, the other half on occupiers, in other cases on the occupiers only on their rental value, and the number of horses and carriages they keep. In towns and burghs, generally, the maintenance is paid for by a rate on the occupiers only.

COUNTY RATES for expenses, such as county officers, registration, militia buildings, rogue money, court houses, are paid by the owners in the country. In towns and burghs, court houses and registrations are paid part by owner, and part by occupier.

PRISON AND POLICE RATES, in the country, are paid by the owner. In towns and burghs the police rates, including cleansing, lighting, &c., are paid by the occupier, the prison and some other minor rates are paid by the occupier ; but he can deduct half the amount from his rent, which he can do also with burial ground rates.

THE LAND TAX, or cess, is paid by the owner.

In towns, also, owners pay a rate for water supplied for public purposes, watering streets, flushing sewers, &c., the occupier, of course, paying for that used for domestic purposes.

The library rate in towns is paid by the occupier.

It may be taken as a general rule that in country parishes the owners pay the larger proportion of the local rates ; but that the reverse is the case in towns.

The following table will show approximately the proportion of the several rates paid by the owner and occupier in towns and burghs:—

RATE.	EDINBURGH.		GLASGOW.		DUNDEE.	
	Landlord.	Tenant.	Landlord.	Tenant.	Landlord.	Tenant.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Poor (City)	0 9	0 9	0 8½	0 8½	0 9	0 9
New Poor House	0 2½	0 2½				
Prisons and Registration	0 1	0 1½	0 1	0 1	0 1½	0 1½
County Hall	0 1½	0 1½	0 0½	0 0½		
Burial Ground				0 4	0 0½	0 0½
Improvement... .. .	0 3½	0 3½				
Houses of Refuge				0 1		
Parks, &c.				0 2		
Sanitary, Sewage, &c. ...				0 2		0 3½
Police, Lighting, Cleansing, &c.... .. .		1 9	0 1	1 0		0 10
Road Money		0 4		0 4		0 1½
Public Water Rate			0 1		0 1	
Public Library						0 1
City Cess	0 1		0 1	0 0¼		
Landlord's Share	1 6½		1 1		0 11½	
Tenant's Share	3 7		2 11¼		2 2½	
Totals	5 1½		4 0¼		3 2	

With regard to assessments on the owners or landlords, it must be borne in mind that the interests are not often so much divided as in England. The owner, for the purposes of

taxation, is held to be the person who is entitled to uplift the gross annual value of the property, and the holders of the other interests adjust their proportions among themselves. The general custom is to assess the owner upon the rent exigible by him, and the occupiers, upon the rents payable by them,—a middle man being treated as an owner on any excess of rent. Each class, be they owners or occupiers, are separately rated, and the assessments are generally collected separately.

Feu duties (or ground rents) are not subject to any local taxes, and in no event is the “superior,” or holder of the feu duty, held to be the owner for the purposes of taxation; but the owner in possession, by himself or tenants, is not entitled to deduct the amount of feu duty from the rental value assessed.

It is found that owners, as a class, do interest themselves to a much larger extent than occupiers in the administration of local affairs, though the opinion seems common that all rates should be leviable from occupiers, if the owners could also ensure their own representation on the local or municipal boards.

MR. R. C. DRIVER (Member) moved a vote of thanks to Mr. RUSHWORTH, for bringing under their notice a subject which so especially affected agreements solemnly entered into between owner and lessee, or tenant.

MR. EDWARD RYDE (Member) had great pleasure in seconding the vote of thanks to Mr. RUSHWORTH. It seemed to him that the first question submitted by Mr. RUSHWORTH, viz., how the value of property would be affected by his proposal, was very simply answered. It was a matter of very little consequence by whom the law prescribed that the

local rates should be paid ; for as a matter of fact, at the present time, the landlord paid all the rates. Of course there was a liability to some new tax during the course of a lease, and that could not be provided against ; but if it was the fact that houses and land commanded that rent which they were fully worth, of course the landlord bore the local burdens. This scarcely needed demonstration ; for if there were no local burdens to bear, the tenant would pay more rent ; and therefore property did command its full rent. Let them look at an instance ;—in New Oxford Street, there were houses which were let at rents very little in excess of the ground rent of the land on which they were situated, so that the men who built the houses had lost the money spent in building them. There was not sufficient demand for the houses, and the rents would not go higher. Golden Square was another locality where rents had not increased. But in the Strand, on the contrary, rents were higher than they used to be, and amounted to a sum far exceeding the interest upon the cost of building the houses *plus* the original ground rent. It was clear, therefore, that demand and supply regulated rent, like everything else. It seemed to him of very little consequence whether the rates were paid entirely by the tenant, or half by the tenant and the remaining half by the landlord. He did not believe that the proposed change would affect the value of property when matters had once shaken down and found their level. He saw no advantage in the proposal, beyond the professional one, which would arise from the great increase in the number of rating appeals, if it passed into law. One passage in the evidence, as quoted in the Paper, especially struck him, where Sir JOHN THWAITES stated before the Committee that he would cast part of the local rates upon the ground landlord, but that it would be unfair to tax a tenant for life. To examine the

value of this opinion, assume that a man was owner of a piece of land, let on lease for 99 years, it seemed to him he was very much in the same position as a life tenant. Sir JOHN THWAITES said he would tax the landlord, because he benefited in the reversion ; but he would not tax the tenant for life, because he had no reversion. To him (Mr. RYDE) that was simply ridiculous ; for what was the value of the reversion after 99 years, and how could the landlord, whom it was proposed to tax, benefit by such a reversion ?

In summing up the arguments against the proposed measure, Mr. RUSHWORTH had said,—“ Assuming that, on re-letting, the owner succeeds in adding to the rent an annual sum equal to the burden cast upon him, the so-called ‘ gross annual value ’ will be increased by that amount, and the imperial taxes, such as income tax and house tax, will be charged upon that increased annual gross value.” That was not so ; because in the Act of Parliament which established the words “ gross annual value,” there was, for the first time, a clear definition of the term. It was now defined as “ the rent which a tenant would pay who did not do the repairs, or pay insurance, but paid all rates and taxes ; ” therefore, if they relieved the tenant from paying some of these rates, they would have to take care in working out their gross annual value. The gross value was the sum a tenant would pay to the landlord, supposing he (the tenant) paid all the rates. At the same time, instances might happen when it might perhaps be a little hard upon the occupier of land that he should pay all the rates. Take for example, the elementary education rate, which would shortly be levied ; it might seem to be hard that the occupier should pay the whole of that rate, yet, in reality, it would ultimately fall upon the owner. It was a question whether the more fundamental alteration ought not to be made

of relieving, for the future, landed property from the exclusive payment of local rates; throwing the educational rate, and the rates for highways (which were used by all), upon the Consolidated Fund, and by this means catch the owners of other property than land and houses, and make them contributaries to the rates.

Mr. J. R. BONNY (Member) thought if any excuse existed for putting the payment of the rates upon the owners of property it would be found in the large arrears which in all parishes (and particularly in Metropolitan parishes) were left unrecovered at present. If the rates were levied upon owners there would be a greater probability of their being paid; and the amount of arrears which were now added to the next rate would be largely reduced. In the letting of small houses, tenants were more willing to pay a lump sum, including rates and taxes, than they were to pay rent and taxes separately; and more rent was obtained for property when tenants knew actually what they had to pay, than by taking a net rent, leaving the tenants to pay the rates. The owners (by owners I mean the freeholders or their lessees in possession, letting on short tenancies) in reality, indirectly or directly, paid the rates now.

Mr. P. D. TUCKETT (Member) considered that the question brought before them by Mr. RUSHWORTH was one on which the opinions of Members of this Institution ought to be expressed. There was no doubt that the Poor Law Board, the late Sir JOHN THWAITES, and others, had become rather alarmed at the large amount of local burdens, and perhaps uneasy as to the possibility of collecting even increased amounts, if needful, from the tenants; and the Committee, whose report had been the subject of Mr.

RUSHWORTH's remarks, had sought for and endeavoured to indicate the direction in which some remedy might be found. The ostensible object of the proposed measure was to bring landlords (as well as tenants) from motives of self-interest, to personally look after local taxation and parochial affairs. He doubted whether this effect would be attained; and there unquestionably would be one tendency resulting from a measure of this kind, which the Committee had apparently failed to recognize; viz., a small but material depreciation in the value of certain classes of property arising from the introduction of an element of uncertainty as to the amount of income to be derived from it. With regard to groundrents, and a high class of house property let on long leases, landlords were willing to take very moderate rents if they could be quite sure of the exact amount of money which they would receive, that it was well secured, and that it would be paid without the slightest trouble. If a man had £100 a year, subject only to reduction by income tax, it would be a perfectly secure and certain income, for the objection which applied to any uncertain local rate did not apply to income tax, since income tax was a uniform charge on any form of property in which he could invest his money. Assume £100 a year to be increased as proposed by the amount of half the average rates to, say, £110 or £115, and then subject yearly to the deduction of the actual amount paid (rendering it a matter of uncertainty from year to year what burdens would be placed upon it by local circumstances), although the net income, he thought, might be about the same as before, the number of years' purchase which such ground rents and well secured rentals would command would be perceptibly reduced; and this would be a material evil, and would withdraw capital

from this class of investment, and would tend to raise the rents which lessees would be required to pay, without corresponding profit to the landlords. As long as freedom of contract was allowed, no harm was done; but if, as was proposed, it was made illegal for a tenant to contract to pay all rates, he believed it would require very grave and unjust reasons to outweigh the evils this uncertainty would introduce. He considered that the real cure for the excessive burdens of local taxation was to be looked for in a different direction, by reform in our present Poor Law system.

The gradual introduction of the uniform system of rating for the metropolis, which was now so popular in some quarters, although exceedingly plausible in itself, was, he believed, founded on mere expediency, and a total disregard of abstract justice,—first, because it affected all vested interests, and gave a premium to those who bought property at a low price on account of high rates, and inflicted an injury upon those who had done so at a high one on account of low rates; and next, because the Metropolis is a purely artificial unit for taxation. The West End is not supported by the East End, but by the rents of the country generally. It would be just as fair to make a uniform assessment all over Essex and the East End, because they were contiguous, as to make a uniform assessment over the whole of London. It seemed to him that the rating of those heavily burdened manufacturing parishes was abstractedly founded on a principle of strict justice; because the existence of those rates was due to the establishment in them of such manufactories (ship building or otherwise), in good times, which collected a large poor population around them, and created a profit on the building of houses for the purpose of lodging the people engaged in

them. In bad times these people were thrown out of work, and the particular district owned by them who had derived the profits of the manufactures in good times, became heavily burdened. The result of uniform assessment would be to punish the owners of property who never shared in those advantages, merely because they were, geographically, neighbours of the speculators who had taken large profits away with them, and in fact to enable manufactures, which on a series of years might not be very profitable, to be carried on by contribution from the metropolis generally.

MR. VIRGOE BUCKLAND (Member) said that it appeared to him that the landlord paid all the taxes; and however an Act of Parliament might affect arrangements during the term of a lease, at the end of it, matters would, in this respect, re-adjust themselves. The element of uncertainty, alluded to by Mr. TUCKERT, would no doubt affect to some extent the number of years' purchase given for a property. By Act of Parliament, tithe was a charge upon land, and unless the landlord, or his agent, provided that the tenant should pay the tithe, it fell upon the landlord himself. He had an instance in his mind in which a solicitor, who undertook the letting of land, had omitted to provide for this, and the freeholder had in consequence to bear the burden of it. Some years ago he had a very peculiar case to deal with. An Act of Parliament was procured for the re-building of a parish church. It provided that a two one-shilling rate should be levied every year, to defray the cost, half to be paid by the landlords and half by the tenants. But there was a case in the parish, of land let on lease under a covenant, whereby the lessee undertook to pay all rates and taxes charged, or hereafter to be charged,

on the freehold; the consequence was, the lessee in this case had to pay the whole of the two-shilling church rate. In his opinion the more unfettered by legislation that arrangements between landlord and tenant remained, the better it was for both of them.

Mr. RYDE said that he knew cases where property in London was divided into as many as five distinct interests, and when they spoke of the landlord paying part and the tenant part, he did not see in such a case how the payment was to be apportioned.

Mr. C. STEPHENSON (Member) said that in large landed estates a variety of interests prevailed to a great extent, because speculative builders made a large proportion of their profits by improved ground rents. These ground rents passed into a variety of hands—to ladies, children, trustees, and mortgagees. But how were all these parties to be represented at the local boards? Take the case of the Out-Ward, St. George's, in which he lived, there were thousands of houses, and many thousands of interests in them. How were they to be properly represented, and in what proportion, and how would women, children, and trustees be represented? It was necessary to attend the parish board, not only at intervals but constantly, if they wished to watch the local expenditure. Apart from all that, when it was done, the system came back again to the question of rents. In Scotland he knew that the poor rate was paid half-and-half, but taking the case of Dundee, if he as a landlord sold his land for a penny per yard, and the person to whom he sold it placed £30,000 or £40,000 worth of property upon it, it was quite

clear that he (the landlord) would have got more than a penny per yard if the buildings were not subject to the burdens. It was argued that the thing would right itself, and that the burden would fall where it was now payable; but notwithstanding that, any alteration of the kind suggested, would, as Mr. TUCKER said, materially influence the value of property for some years to come. Ground rents which were regarded as secure and certain investments in the market fetched high prices on that account; but if they were subjected to such local demands as the education rate, workhouse and lunatic asylum rates, the value of them would be constantly fluctuating, and other more certain investments, free from such burdens, would be sought after. It appeared to him that there was no escape from taxing all the property in the country, personal as well as landed. They could not add to the burdens and charge them all to house and landed properties, but they must be extended to those properties which have grown up and have been created, such as shares, funded property, and other similar things.

Mr. E. J. SMITH (Member) remarked that as he appeared to be the only person present who had gone through the Blue Book, he felt it to be incumbent on him to lay before the Meeting the kind of information which he derived from its perusal. The value of a Report of this kind depended considerably on the majority by which it was carried, and on the extent to which it was supported by the evidence; and he would endeavour, very shortly, to give them an idea of the impression which it made on his mind after careful reading.

He had found that there were three series of resolutions proposed, which differed very much both in substance and

principle, and it would be found that the series on which the Report of the Committee was based received the support of eight Members, while eight were opposed to it, and was carried by the casting vote of the chairman. He thought they would find also, if they took the trouble to read the Report, that it appeared to say something, but, in reality, it was so carefully guarded both before and behind, as to assure them that it did not mean anything at all. It opened with an announcement that the Committee, "without pledging themselves to the view that all rates should be dealt with in the same manner, were of opinion," &c. Now that, of course, enabled the recommendations they gave to be applicable either to all the charges of the table exhibited by Mr. PENFOLD, or only to the first of them. To make assurance doubly sure, the Report concluded by saying that the Committee "are of opinion that the inquiry on which they have been engaged, forms only one branch of the general question of local taxation; and that other considerations, besides those which have been submitted to their investigation, should be previously entertained and be taken into account in any general measure giving effect to the above recommendations." Now he thought, considering the fact that the head and tail of the Report were carefully kept open for the purpose of *varying* all the recommendations before them, it would not be regarded as calculated to have any great effect upon legislation.

He would then proceed to the evidence itself, and without inflicting upon them the details of the six thousand questions and answers, he would state that out of about a dozen witnessess, two-thirds were officers, who gave evidence of the actual assessments in different parts of the country, in London, Birmingham, Scotland and other places, and who

only stated facts. There were some seven or eight, however, who gave evidence calculated either to support or to oppose the views which were put forward.

The first evidence of that kind, and, to his mind, incomparably the best, was that of their esteemed Member, Mr. HENRY ARTHUR HUNT, who, being a thorough master of his subject, stated the whole facts of the case as clearly as possible. The point which he was in attendance to prove, was the fact that the ground landlord, in fixing the sum which he took for the ground rent of his estate, necessarily had regard to the assessments which would fall upon the houses which might be built upon it; and he (Mr. SMITH) apprehended that there could be no doubt the sums obtained for ground granted for building purposes were most materially affected by the scale of assessments which such buildings were expected to be subjected to. He would instance a case in his own experience, where part of an estate was within a borough and the other part out of it. The assessments in the town were higher than those out of the town, and he was paid a larger sum for the estate subject to the smaller scale of assessment than for that situated in the town itself. Mr. HUNT gave evidence on this point; also, that if the two sides of a street were situate in two different parishes, and the assessments were on a different scale, the houses on the side where the scale of assessment was the smallest would give the owner the largest income. He thought, if they read Mr. HUNT's evidence, they would find it to be such as every Member of this Institution would concur in and support.

The evidence to be found at the latter end of the book, on the contrary, was calculated to give them a good deal of new and extraordinary information. The last witness, Mr. R. D. BAXTER, stated that " he had occasion to consider this

subject a good deal in 1866-67, and that in the course of his investigations he came in contact with persons connected with property as valuers, with farmers, parish officers, and householders; and he found that they invariably said that the owners paid the rates:" and he added that "if surveyors or agents valued for the purpose of rent, in the re-valuation of an estate, they invariably deducted the rates from the produce of the land, or from the fancy value which they had put upon a house." On this evidence, Mr. BAXTER "came to the conclusion that he must rather dismiss their evidence from consideration, and depend more upon the facts."

Being asked whether in fixing the price, the landlord's agents actually did take the rates into consideration, as outgoings which affected the value of the property, he replied, that they did,—“but he considered that to be the theory rather than the strict practice of the country;” and himself thought that the landlord's income was determined “by the custom of the country.” Being asked whether “his experience in examining into this subject was that a great deal went by custom” he replied, “a great deal by custom.” Extending his view to houses, he stated “you will find that the amounts of rent are settled by the custom of the locality, and not by the variation of the rates.” “If the rates are increased,” said he, “the house rent does ~~not~~ diminish, and *vice versa*.”

This evidence was calculated so much to extend their views, that the temptation of quoting one or two further points was irresistible. The witness being asked whether the rates were more or less taken into consideration in forming the contract for the lease of a house, the reply was,—“I do not think they are by the generality of occupiers of houses. They know about what the rent is in the locality, and they make their own bargain for less or more

without regard to the rating." Having stated this to assist the decision of the Committee on the subject, he was next asked—"If there was a street of which one side was in one Union and the other side in another, and the one was highly rated, and the other less rated, would not that distinction make a difference in the rentals?" The answer was,—“I grant you that: and I remember Mr. HARCOURT was telling me one day that he had a case in point; he wanted to take a house, and he found it was £10 lower on the one than on the other side of the street, and when he asked the reason, he was told it was because it was in a different Union, and had different rates.” Next, being asked if he knew anything about land tax, he said,—“It has generally been a small tax; but the land tax is very oppressive in some localities, where it was originally assessed on a high valuation. I do not know that it is so in London; I know it is in the country.” Now he (Mr. SMITH) apprehended that the highest assessments to land tax were to be found in the City of London, and that there were no other such cases to be found in England. This same witness before the Committee then went into quotations from ADAM SMITH, and said that he stated that the whole incidence of the rates fell upon the occupier. This assertion was a misapprehension. ADAM SMITH himself stating that a tax, *e.g.*, window tax is a deduction from house rent. It would be tedious to give each item calculated to furnish the Meeting with amusement; but among others, one of the evidences of how thoroughly ignorant this witness was of the mode of dealing with estates was this. He was asked, “In the course of your inquiries have you found difference of opinion to prevail with reference to the incidence of tithes?” to which the reply was, “No; that is such a small thing, that I have

never heard it mentioned." Now the Member of the Committee who asked that question had a very considerable tithe rent-charge over the greater part of his estate, and he followed it up by asking—"But surely a tithe rent-charge of 6s. or 7s. in the pound, you would not consider a small thing?" "No," replied the witness, "that would be heavy, but I have never come in contact with so heavy a tithe rent-charge as that." Then he was asked, "Has it not occurred to you to consider the question of tithe in connection with rates and other charges upon land?" "No," he replied, "because I have hardly ever come in contact with any high tithes." Then he was further asked, "Are you aware that in many parts of the country the tithes are considerable, in some cases equal to 5s. in the pound?" "No, I was not aware of that."

He would now advert shortly to the subject under consideration. He came down without any intention of taking any part in the discussion, because it appeared to him the whole question raised was of so unsatisfactory a character as to be almost certain to result in nothing. His own views were that, inasmuch as tithe-owners, house-owners, and land-owners had (by accident not intentionally) paid the whole of the poor rates and the highway rates for 300 years, and that all purchases and sales within that time had been based upon the assumption of their paying such poor and highway rates, those two rates should continue to be charged upon those estates as they now were ; but that all other charges whatsoever should be paid out of the Consolidated Fund, and not out of real property alone.

Mr. RUSHWORTH, in reply upon the discussion, said that he was induced to bring this matter under the notice

of the Meeting, for the following reason. In the autumn of last year, he had a conversation with one of the largest house-owners in the country, who had previously had an interview with an influential Member of Parliament, to whom he put the question—whether he thought there was any intention on the part of the Government to carry out the recommendation of the Committee on this subject, and the reply was, “Certainly, next session.” He (Mr. RUSHWORTH) expressed his opinion that it would be an absurd interference with free contracts in the buying, selling, and letting of property, and elicited from the tone of the discussion here, that in the opinion of the Members, there was no good reason why any such alteration should be made. No one had stood up in favour of it, and he gathered that it was regarded as a mischievous interference with the rights of free contract. If, by the publication of these proceedings, they could make any impression upon those who had the matter in hand, he should be amply rewarded for any time and trouble which he had given to the subject.

The PRESIDENT said they were very much indebted to Mr. RUSHWORTH for his Paper. In his own practice, he had always looked upon this matter of rating in the same way as he understood it to be regarded by those who had spoken. The fact was, the owner did pay the rates; every surveyor, when looking over a property, and estimating its value, made it one of his first enquiries what amount of rates it was subject to, and this formed a deduction from his estimate of the value for rent. He was now speaking of agricultural property let at a rack rent; but when they came to the question of ground rents, which had been treated in an excellent way by Mr. HUNT, he

(the PRESIDENT) considered an interference of the kind contemplated to be most dangerous, inasmuch as it might conflict with agreements which had existed, perhaps, for a long period. It showed the great danger and mischief of such evidence as was given before the Committee, and upon which the Report was founded.

The vote of thanks to Mr. RUSHWORTH was passed unanimously, and the Meeting adjourned.

RESULTS OF THE LAND PURCHASES OF THE TUNBRIDGE AND DARTFORD RAILWAYS.

BY EDWARD RYDE, MEMBER.

*Read at the Ordinary General Meeting of the INSTITUTION OF SURVEYORS,
January 30th, 1871.*

EDMUND JAMES SMITH (MEMBER) IN THE CHAIR.

It is known to most of the Members of this Institution that the original line of the South Eastern Railway from London to Folkestone and Dover pursued a direct southerly course from the point at which it leaves the Greenwich Viaduct at Spa Road to Red Hill, near Reigate; and that there it turns at a right angle and proceeds in a due easterly course *viâ* Tunbridge, Ashford, and Folkestone to Dover.

For about $2\frac{3}{4}$ miles from London Bridge its trains run in common with those of the Brighton Company, along the line of the Greenwich Viaduct, the line being the property of the London and Greenwich Company, leased for 999 years to the South Eastern Company.

From the Greenwich Junction to Croydon, a distance of about $6\frac{1}{4}$ miles, the railway is the property of the London, Brighton, and South Coast Railway Company, who acquired it from the Croydon Company (the original constructors), the South Eastern Company having running powers over it.

From Croydon to Red Hill the line was made by

arrangement by the Brighton Company, and paid for in equal moieties by that Company and by the South Eastern Company, and afterwards equally divided in length between them—the Brighton Company taking the first half from Croydon to Stoa's Nest, and the South Eastern the remaining half from Stoa's Nest to Red Hill. Each Company has running powers over the line of the other Company.

This route was forced upon the South Eastern Company by the landowners and by the action of Parliament.

The North Kent line of the South Eastern Railway diverges from the Greenwich Viaduct, as is well known, at a point near the Surrey Canal, to the eastward of the main line, Greenwich Junction, and, after passing by New Cross and Lewisham, turns northward to Blackheath, Charlton, and Woolwich, and proceeds thence *viâ* Dartford, Gravesend, and Strood to Maidstone.

To straighten the main line and shorten the run to Tunbridge, Tunbridge Wells, and Hastings, Ashford, Folkestone, and Dover, by a line from Lewisham to Tunbridge, and in like manner to shorten the North Kent by a straighter line from Lewisham to Dartford, were the objects of the works authorized by the Act passed in the Session of Parliament of 1862.

Those works consisted of:—

1. A widening of the *North Kent Railway* from New Cross Station to Lewisham, a distance of $58\frac{3}{4}$ chains, so as to admit of a separation of the North Kent traffic from that of the new lines, at an estimated cost of £83,814.

2. The *Tunbridge* line, commencing at Lewisham by a junction with the widened North Kent Railway, and passing by way of Hither Green, through Chiselhurst, Bickley Park, Orpington, River Head, and Sevenoaks to Tunbridge, in a nearly straight direction, for a length of 23 miles and

54 chains, and effecting a saving in railway distance between London and Tunbridge, and consequently between London, Tunbridge Wells, Hastings, Folkestone, and Dover, of very nearly 13 miles. The steepest gradient on this line is 1 in 104. The tunnels are, in the aggregate, very nearly 4 miles in length; and, generally, the engineering works are heavy. The estimate for land and works was £901,849.

3. The Dartford line, commencing by a junction with the Tunbridge line at Hither Green, and passing by way of Lee, Eltham, Sidcup, Bexley, and Crayford, to Dartford, a length of 9 miles and 34 chains, and terminating by a junction with the North Kent line, on the London side of the Dartford station. The steepest gradient on this line is 1 in 100; there are no sharp curves nor tunnels; and the estimate was £162,996.

Thus the aggregate estimate for the three works amounted to £1,148,659, of which £192,000 was for land taken and compensation for injury to adjoining lands by severance or otherwise.

It is no part of the purpose of this Paper to record how many previous attempts had been made to obtain Parliamentary powers to construct one or both of these lines; nor how nearly, by such a small means as the omission of the name of one of the largest parishes from the Parliamentary notices, the revived attempt was again doomed to be unsuccessful; nor how the works of the Tunbridge line having been let at a price much below the estimate, caused the failure of the contractor, nor how the Company had to finish the works at an ultimate cost in excess of the estimate; but it is intended to record for the information, and, perhaps, assistance of the Members of the Institution, the actual cost of the land purchased and the amounts paid for compensation and injury by severance and otherwise.

The property included in the Parliamentary estimate of

£192,000, comprised an area of 409A. 2R. 33P., and, including houses, the estimate averaged £468 12s. per acre, or £5,673 per mile.

The property actually purchased, including houses and land for stations, not provided for in the Parliamentary estimate, extended to an area of 513A. 2R. 31P., and cost £230,156, an average of £448 an acre, or £6,800 per mile. Of this quantity, the land taken for stations amounted to 32A. 1R. 2P., and cost £11,069.

A little line, called the Mid-Kent Loop, not contemplated in the original works, consumed an area of 1A. 1R. 21P., and cost £500.

An area of 4A. 3R. 10P., was taken, at a cost of £1,700, for temporary and special purposes.

Surplus lands, to the extent of 30A. 0R. 16P., have already been sold for £15,610, and surplus lands and houses remaining, to the extent of 23A. 3R. 35P., are at least of the value of £14,911.

All these extra items, together amounting to an area of 92A. 2R. 4P., and to a cost of £43,790, reduce the land purchased for the railway proper to 421A. 0R. 27P., or an average of 12·44 acres to the mile, acquired at a cost of £186,366, an average price per acre of £442 10s., and per mile of £5,506, as compared with an estimated quantity of 409A. 2R. 33P., a cost of £192,000, an average per acre of £468 12s., or per mile of £5,673.

The claims sent in numbered 431, of which (regardless probably of the vested interest of surveyors) 397 were settled by agreement without the intervention of juries, arbitrators, or professional witnesses. Of the remaining 34, 26 were referred to arbitration, and 8 were settled by the verdicts of juries.

The arbitrators were Mr. JOHN CLUTTON, Mr. HENRY ARTHUR HUNT, Mr. DANIEL NORTON, Mr. GEORGE POWNALL,

Mr. JOHN SHAW, Mr. JOHN OAKLEY, Mr. FREDERICK JAMES CLARK, Mr. ROBERT COLLIER DRIVER, Mr. FRANCIS VIGERS, and Mr. GEORGE BARNES WILLIAMS.

The 397 cases settled by agreement amounted in value to 76 per cent. of the whole.

The 26 cases referred to arbitration to 16 per cent. of the whole.

The 8 jury cases to 8 per cent. of the whole.

The following are the statistics of the various parts of the undertaking, taken as separate works:—

The North Kent widening involved the purchase of 33 houses and premises, and a small piece of nursery and market garden land, containing in all an area of 2A. 0R. 4P., and costing £16,148 15s.

The Tunbridge line involved the purchase of 58 houses and gardens, a farmhouse and homestead, parts of brickfields, market garden ground, building and other lands, to the extent of 357A. 1R. 23P. (being at the rate of 15 acres to the mile), at a cost of £151,964 6s., averaging £6,417 per mile, and £425 per acre.

The Dartford line involved the purchase of 10 houses, a brewery, a tan yard, and other lands, to the extent, in the whole of 154A. 1R. 4P. (being at the rate of 16·36 acres to the mile), and costing in the aggregate £62,043, or an average of £6,580 per mile and £402 an acre.

Thus the cost of all the land purchased, if taken separately, was:—

On the Tunbridge line £425, and on the Dartford line £402 an acre. But it must always be borne in mind that that price included the allowance for forced sale, and the compensation for injury to adjoining lands, by severance or otherwise, and also surplus lands and buildings. The surplus properties sold on the North Kent widening comprised an area of 1A. 0R. 8P., and realized £6,520.

On the Tunbridge line the quantity was 27A. 3R. 36P., and the price realized £6,760.

On the Dartford line the quantity was 1A. 0R. 12P., and the price £2,330. The aggregate is 30A. 0R. 16P., and the price £15,610.

The surplus lands and houses remaining on the North Kent widening comprise an area of 22 perches, and are of the value of £811.

On the Tunbridge line they measure 9A. 0R. 3P., and are of the value of £11,110, and on the Dartford line, they contain 14A. 3R. 10P., and are of the value of £2,990.

The total quantity being 23A. 3R. 35P., and the total value £14,911.

This unsold property, which for the most part consists of houses and land in the parishes of Lewisham and Bexley, produces a present rental of £922 14s.

If the surplus lands alone (sold and unsold) are deducted from the total quantity purchased, the area of land is 459A. 2R. 20P., the cost of it is £199,635; and the average price per acre is £434; and the price per mile, £5,941.

To go into further details. In Lewisham parish 54 houses and 4A. 0R. 3P. of land, cost £27,218. Market garden ground to the extent of 4A. 1R. 13P., cost £3,945, or an average of £911 an acre. The brickfield land, measuring 2A. 1R. 11P., cost £4,114, or £1,774 an acre. And 33A. 1R. 17P. of building land cost £17,766, or an average of £533 an acre.

In Lee parish, 27A. 2R. 32P. cost £8,161, or £295 per acre.

In Bromley, 26A. 1R. 36P. cost £20,197, or £763 an acre.

In Chislehurst, 16A. 1R. 29P. cost £8,692, or £529 an acre.

In Orpington, 29A. 2R. 8P. cost £4,701, or £159 an acre.

In Farnboro', 10A. 1R. 12P. cost £1,920, or £186 an acre.

In Chelsfield, 21A. 1R. 1P. cost £4,479, or £210 an acre.

In Halstead, a farm homestead and 1A. 2R. 38P. cost £1,861.

In Shoreham, 15A. 2R. 9P. cost £3,249, or £209 an acre.

In Otford, 31A. 0R. 37P. cost £8,789, or £281 an acre.

In Sevenoaks, 72A. 2R. 24P. and four cottages, cost £22,952, or £316 an acre.

In Leigh, 3A. 2R. 10P. cost £746, or £209 an acre.

And in Tunbridge, 56A. 3R. 23P. cost £13,172, or an average of £231 an acre.

On the Dartford line, 20A. 2R. 35P. in Lewisham cost £6,200, or £299 an acre.

In Lee, 13A. 1R. 12P. cost £5,423, or £407 an acre.

In Eltham, 43A. 1R. 4P. cost £14,332, or £331 an acre.

In Bexley, 64A. 0R. 13P. of land and some houses, a tanyard, and a brewery, cost £31,407, or an average of £490 an acre.

In Crayford, 6A. 1R. 22P. cost £3,281, or an average of £514 an acre.

And in Dartford, 6A. 1R. 38P., cost £1,400, or an average price per acre of £216.

As an index to the character of the estates interfered with, the following short description may be useful.

The property taken for the NORTH KENT widening may be briefly described as consisting of suburban houses and gardens in the parishes of Deptford and Lewisham. On

leaving this widened line in the parish of Lewisham the Tunbridge line occupies the site of other suburban houses and gardens, of market garden ground, parts of brickfields, some low-lying meadow land on each side of the Ravensbourne, old village property in the main street of Lewisham, and building land; the chief landowner in this parish being the Earl of St. Germans. Quitting Lewisham beyond Hither Green, and immediately after the junction of the Dartford loop, the main line enters Lee on the estate of Lord Northbrook, which there consists of agricultural land, rapidly developing a building character. The remainder of the land in Lee consists of a few pieces of agricultural land belonging to the Mercers' Company, and other owners.

In Bromley the first estate is that of the late Samuel Scott, Esq., known as Sundridge Park, where a short tunnel occurs. Camden Park, the property of Nathaniel William John Strode, Esq., in Bromley and Chiselhurst parishes, is the next large estate affected, and thence the line runs into Bickley Park,—which belongs to George Wythes, Esq., a gentleman well known to Members of this Institution,—and on which is situated the Chiselhurst station. Bickley Park is also traversed by the London, Chatham, and Dover main line, over which the Tunbridge line crosses.

Re-entering Bromley parish, the line crosses the extreme end of the estate of Lord Sydney, the Lord Lieutenant of the County, and passes through the parish of Orpington, in agricultural and woodland belonging to various owners, amongst whom are the Governors of St. Thomas's Hospital, —on whose estate is Orpington Station,—the Ecclesiastical Commissioners, and James Glode Stapleton, Esq., the largest proprietor in the parish. A small piece of line through agricultural land in Farnboro' parish brings us into Chelsfield, where is the third station and the second tunnel, both on the estate of William Waring, Esq. The agricultural

parishes of Halstead and Shoreham are next passed, the line in the latter being almost entirely in the Polhill tunnel, through the estates of Humphrey Francis Mildmay, Esq., and Charles Polhill, Esq. In Otford parish is situated the Dunton Green and Riverhead station, on the estate of Samuel Welford, Esq., whose claim was one of the few contested. In the parish of Sevenoaks is the pretty valley of Riverhead, which the line traverses within a short distance of the church and the Bradbourne estate, which, from its proximity to the town, has a decided building character, and on which occurs the junction of the Chatham and Dover Sevenoaks line with the South Eastern Tunbridge line. The next estate is Kippington Park, the property of John Francis Austin, Esq., on which is the Sevenoaks station, about five minutes' walk from the town, and chiefly through which is the Sevenoaks tunnel, 3,451 yards in length, in one part 394 feet below the surface, and in making which was tapped the water now supplying the town of Sevenoaks. Part of this tunnel is under Sevenoaks Common, and portions of the estate of the Dowager Countess of Amherst, and of William Lambard, Esq., whose property is known as Beechmount. In Leigh parish the line runs through the agricultural estate of Frederick David Goldsmid, Esq., which extends into Tunbridge parish. Soon after entering Tunbridge parish is Hildenboro' station, after leaving which the line is in agricultural property, excepting the Mountains' estate, and Bardlus, on the Medway, near which the line effects its junction with the old main line of the South Eastern Railway.

The DARTFORD line commences with the junction already referred to at Hither Green, on the estate of Earl St. Germans, and passes through Lee on the estates of the Lord Northbrook and the Crown, on the latter of which is the Lee station. The Crown estate also extends almost

through the parish of Eltham, and consists chiefly of Home Park and Middle Park, the property of Wm. Blenkiron, Esq.

The railway next passes within a short distance of the remains of Eltham Palace to Temple Lane, on one side of which is the Eltham station, and on the other the residence known as Eltham Place.

The land, after Eltham station is passed, is agricultural, with a dormant building value, chiefly forming part of the Lamorby estate of John Malcolm, Esq., which is in Bexley parish, into which the line enters after crossing Pope Street. The Sidcup station in Sidcup Lane, and close to Halfway Street, is on the Lamorby estate; after leaving which the line runs through the estate of Coleraine Robert Vansittart, Esq., and through land belonging to the University of Oxford to Bexley station, which is in the village of Old Bexley. Quitting the village, after taking a few cottages and passing through a brewery, the line crosses the Cray and continues through the University estate into the market garden and orchard land of Mr. Josiah Bath, a well-known fruit grower. Layford station is partly in Bexley and partly in the parish from which it derives its name, and the line after leaving it passes through land belonging to Sir Gregory Page Turner and to Charles Swaisland, Esq., into the parish of Dartford, at the commencement of which the junction with the old North Kent line is effected.

Mr. F. J. BRAMWELL (Associate of Council) was sure that the Meeting would accord a vote of thanks to Mr. RYDE for his Paper, in which results were tabulated in a manner so extremely clear and useful.

Mr. G. WESTBURY (Member) seconded the motion, and expressed his sense of the value of the Paper. He said that

his experience in the purchase of land for railways had been chiefly confined to agricultural districts. In some cases, houses in a village and the best land in the parish were taken; in others, land at the extreme edge of the parish; and in such cases the values differed to a great extent. The cost of land, therefore, in one parish, was hardly a fair criterion of the price in the adjoining parish, where the situation and circumstances of the property might be totally different.

Mr. JOHN CLUTTON (Past President) said that he would lay before the Meeting the results of some experience in the purchase of land on the north side of London. The purchases with which Mr. RYDE's Paper dealt, commenced, for the most part, about five miles from London. His (Mr. CLUTTON's) firm negotiated the purchases of land for the St. Pancras' station of the Midland Railway, and also for the railway itself for the first ten miles out of London. The actual cost of the land on which the Midland station was constructed, was, including surveyors and all other costs, exactly £50,000 an acre. He need not say that the quantity of land purchased for that station was very large, amounting, together with the ten miles out of London to which he had alluded, to 470 acres; but the greater part was absorbed by the St. Pancras', Hendon, and other stations. A good deal of the property on which the St. Pancras' station stood, and some 50 to 100 acres of land, were purchased by the Company, very judiciously, some years ago, in anticipation of their some day coming into London. This, of course, very much reduced the ultimate cost of acquiring the property. There were very few references, or jury cases, and the costs were therefore reduced to a *minimum*. With regard to the land out of London, the portion near Hendon (which was almost within the building circuit) cost nearly £600 per acre, but directly after crossing the Brent, the price fell to

about £350, and in Edgware parish to £250 an acre,—thus corresponding to a considerable extent with many of Mr. RYDE's purchases similarly situated and circumstanced.

He might mention there was a singular variation between the estimated quantity of land required for the Parliamentary line, and that which was actually purchased. The land for the original Parliamentary line was estimated, he believed, to cost half a million, whereas the property purchased (as appeared by the published accounts of the Company) cost about a million and a quarter, or more than double the amount of the estimate. The quantity, however, was increased to a larger extent than the price. The original quantity was 209 acres, and the quantity purchased 470 acres, so that the estimate was nearly borne out by the results.

The foregoing remarks applied to property quite in London, and to lands beyond the limits of that, which might be called ripe for building. The cost of acquiring the intermediate properties varied greatly, and the following details might not be uninteresting :—

About 1 mile from the Euston Road, the line, for a distance of $2\frac{3}{4}$ furlongs, passed through a suburban estate, fully developed, and for the purposes of the line it became necessary to acquire lands and houses, which, (including a share of the roads) occupied an area of $5\frac{1}{2}$ acres, the cost of which averaged nearly £15,000 per acre. The line then passed, for about a like distance, through a similar estate, in course of development, and the quantity taken was 6 acres, at an average cost of £10,000 per acre. In both these estates the line was in deep cutting, and the accommodation works were expensive. The value of the surplus property, not required for the railway, averaged about 15 per cent. of the purchase money. In both the foregoing cases high

prices were, by agreements made before the passing of their Act, paid to the freeholders.

The next $1\frac{1}{2}$ furlongs passed through old houses and premises, adjoining the Kentish Town Road, and with regard to which no useful information could be given, but adjoining this, a large tract of land (comprising two estates, ripe for building, but undeveloped) was acquired at £1,400 per acre, in one instance, and £1,000 in the other.

He had found great difficulty, when comparing the purchases recorded by Mr. RYDE, in reconciling the differences of cost in contiguous parishes; no doubt they arose, in a great measure, from house property being included in some cases. At Lee the cost was somewhat under £300 an acre, but at Bromley it was £763 per acre. Having regard to the distance of the parishes from London, this difference was remarkable; but, no doubt, Mr. RYDE could explain it. Then, again, at Eltham the cost was £331, and at Bexley (which was further from London) £490 an acre; but it would, no doubt, be explained that the landowners in Eltham, who took an interest in the promotion of the railway, sold the land for line and station at low prices, in consideration of the advantages to be obtained by opening the railway through the district. Again, as respected Chislehurst and Orpington, the difference of price was nearly £400 an acre, a fact which at first sight looked rather startling.

Mr. R. VIGERS (Member) said he had not come with the intention of taking part in the discussion, but on a future occasion he should be pleased, if opportunity occurred, to lay before the Institution some facts relative to purchases of land in London in which he had been concerned. Like Mr. CLUTTON, he had been struck by the differences of price paid for land in adjoining parishes, more especially in the

case of Chiselhurst and Orpington, but no doubt Mr. RYDE would, in his reply, account for the difference.

Mr. J. E. COXWELL (Associate) remarked that the cost of land in some parishes varied very much, parts of it being adapted for building or commercial purposes, and other parts for agricultural purposes only. In such parishes the Company might be paying after the rate of £1,000 an acre for some of the lands, and less than £100 an acre for others; so that it would not be fair to take the mean of these as the average price of land in those parishes. He therefore considered the cost of the line should be looked at in its entirety,—at least that was his own experience with reference to purchases made for the Great Northern Railway.

Mr. E. RYDE, in reply, said that it was difficult to know beforehand whether a Paper of this description would be acceptable to the Institution, but if it had proved to be so, he should be pleased, on a future occasion, to give in detail the cost of the property taken in the construction of the Charing Cross and City Terminus stations from London Bridge. The lines of railway with which he had dealt in his Paper, were not, on the one hand, strictly agricultural lines, and on the other did not entirely traverse what might be termed building districts—at all events after passing Lewisham. First, with reference to the cost of the land as set down in the Paper, he would observe that it was difficult, in dealing with such figures, so to handle them as to put them into an intelligible and readable form. Of course the prices he had given included not only the cost of the land, but also the allowance in consideration of forced sale, which on agricultural land was 25 per cent., and on buildings 10 per cent.; they also included the sums paid for severance and damage, two items which of course affected the average price of the land taken.

Setting those things, however, on one side, and lumping the general price of the land, the reasons for the great variation in the prices which had been alluded to were obvious enough. To take the case of Lee and Bromley. In speaking of Lee they must not lose sight of the fact that one landowner he had to deal with was the Crown, to whom it was no doubt a great advantage to have the railway made, and he had no hesitation in saying that his friend Mr. CLUTTON, acting on behalf of the Crown, met him very fairly, and that as much land was obtained for £250 per acre as was required through the Crown estate. In the case of Bromley, one owner put a price upon his land which seemed almost fictitious, but that gentleman was actually selling plots of land near Bickley Park at the rate of £700 an acre, and they must bear in mind that Bromley was not a parish accommodated for the first time with a railway station, but had one already, though a less convenient one. That accounted to some extent for the price given for the land in Bromley parish. Moreover, the land itself was very attractive and was well wooded, undulating, and possessed every feature calculated to give it a building value. The difference in the case of Chiselhurst and Orpington arose from the fact that the land taken in the former parish partook of the building value, while in Orpington it was what might be called purely agricultural land. If the list were examined it would be found that the cost of land in the agricultural parishes did not vary materially: thus in Orpington the price was £159; in Farnborough, £186; and in Chelsfield, £210 per acre, the whole three being purely agricultural parishes. Going on towards Sevenoaks, building value was again encountered, and after leaving Sevenoaks, on approaching Tunbridge, a value created by the existing railway. With regard to the different prices in Eltham and Bexley, the first represented land without

buildings, at £331 per acre, while the latter included a brewery (afterwards sold for £1,000), and a number of other buildings taken for the purposes of the line ; these items brought up the price to £490 per acre.

THE CHAIRMAN said that, although it was only to be expected that they, as surveyors, would take different views of the facts put before them by Mr. RYDE, he was sure they would all agree that the facts themselves were exceedingly serviceable and useful ; he thought they were also under obligations to their friend Mr. CLUTTON for the information he had been so good as to give them respecting the cost of the purchase of land for the St. Pancras' station, and the first ten miles out of town of the Midland Railway. He believed that he was only expressing the sense of the Meeting when he said that the Institution would certainly feel much obliged if Mr. RYDE would lay before them, on some future occasion, the information as to the cost of the Charing Cross and Cannon Street stations, which he was so good as to offer in the course of his speech.

A vote of thanks to Mr. RYDE was passed unanimously, and the Meeting adjourned.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, February 13th, 1871,

 MR. JOHN CLUTTON, PAST-PRESIDENT, IN THE CHAIR,

The adjourned discussion on Mr. WILLIAM MATHEWS', Jun., Paper, "On the Valuation of Annuities and Reversions Dependent upon Terms of Certain Duration," read at the Ordinary General Meeting, December 12th, 1870, was resumed by

Mr. EDWARD RYDE (Member), who said it appeared to him that the subject might be divided into two heads,—first, the relative values of the different classes of real property; and secondly, the separate value of the various interests in one property which happened to be divided between two or more people for different terms of years.

In the course of his Paper, Mr. MATHEWS referred to the different rates of interest which the purchaser of real property would expect to get from his investment, according to the nature of the property. For instance, he took purely agricultural land to be worth from 30 to 40 years' purchase, or $2\frac{1}{2}$ per cent., while certain classes of house property, where the value of the land was not very large in proportion to the rack rental value of the houses, he considered to be worth 16·7 years' purchase, or 6 per cent. In the investigation of this subject this difference must not be lost sight of. Then came the question whether, if a man were deprived of a 6 per cent. property, he should be allowed such a sum as would

procure him the same income on a re-investment in $2\frac{1}{2}$ per cent. property.

It was supposed by Mr. MATHEWS, as an illustration, that "the possessor" of a property of £100 a year, worth in fee simple 25 years' purchase, "instead of selling it devised it by will, leaving an annuity for 10 years to A with remainder to B, and that at his death A and B wished to dispose of their interests. Upon what principle," he asked, "were they to be valued?"

In the first place, a person so leaving property, himself depreciates it; because a property so held by two people is not of the same value as it would be in the possession of one man who could do as he liked with it. Mr. MATHEWS went on to say, "Many surveyors, I imagine, would answer this question by quoting the popular rule that the cumulative investments must be made in the same description of security as that from which they are derived." He (Mr. RYDE) considered that if a man had a 4 per cent. property left him, producing £100 a year, there could be no reason why he should alter the security by selling the property, whether he be the annuitant or the reversioner, unless he wanted to realize a sum of money representing the value of his interest. In that case he must have just such a sum as under the existing circumstances he could get, and he did not apprehend that such a case would come under the notice of a surveyor, unless the property were to be sold by the consent of both annuitant and reversioner, and the purchase-money divided between them. But, as such a sale could only be made by the consent of both, it was easy for either party to insist upon certain conditions; so that did not help to settle the question in a practical way. That was a case of dealing with the freehold of one man, on lease, for a number of years, to another.

The table was next investigated by Mr. MATHEWS, which had been introduced very usefully into modern collections, and which gave the number of years' purchase, assuming a man was dealing with a certain property which produced one rate of interest, while he could only re-invest at another rate of interest. He gave an instance, on page 59, where he stated that, "The present value of an annuity of £100 for 10 years, to pay the purchaser 4 per cent., and reproduce the purchase-money by the investment of the sinking fund at 3 per cent., is £786." Had he taken the rate of interest at 4 per cent. in each case, the annuity of £100 for 10 years would have been worth in present money £811. "The present value of the reversion, or the sum of money which, invested at 3 per cent. compound interest, will amount to £2,500 in 10 years, is £1,860," which, added to £786, gave a total of £2,646, the value of the property being only £2,500. Upon that Mr. MATHEWS made this observation,—“Now, although an owner may easily diminish the present market value of his property by injudicious legal limitations, by no known process of legerdemain can he possibly make it worth more money by mere arrangements on paper.” Certainly that was correct: they would all agree that the property was only worth the £2,500. On page 62 there was shown, that which Mr. MATHEWS thought a proper way of valuing this property, viz. :—

Present value of £100 a year in per-	
petuity, to pay 4 per cent. . . .	2,500
Present value of £2,500, due 10 years	
hence, at 3 per cent. compound	
interest	1,860
Present value of annuity of £100 a year	
for 10 years	£640

He (Mr. RYDE) reminded the Members that if they had to take compulsorily from a lessee, property which brought in £100 a year for 10 years, they could not buy it for £640, and it would be a hardship if they could, nor would any one give the reversioner £1,860 for his interest in it; therefore, it brought them back to the common practice. They must deal with this as a 4 per cent. property; it was 4 per cent. by its nature, because it was not so well secured as the Funds, and better secured than houses which paid 5 or 6 per cent., and they must deal with it as though each man were entitled to his full 4 per cent. Lower down on the same page Mr. MATHEWS said this—"We have seen that this valuation depends upon the fallacious notion that the investments to reproduce the principal could be made at a rate higher than the current rate of compound interest, and that, by introducing the correction that they shall be made at the current rate, the present value of the annuity becomes reduced to £786. We have seen, also, that both these results are affected by a second fallacy, equally irrational with the first, viz., that an annuity ought to pay a purchaser the same rate per cent. whatever its duration, and that, when this is corrected, the value of the annuity is still further reduced to £640."

When they spoke of fallacy, that, at any rate, depended upon the circumstances under which the transaction took place. If it were under the compulsory powers of The Lands Clauses Consolidation Act it was not a fallacy, because there is a provision giving parties under disability the power to re-invest money in the same description of property as that taken from them, at the expense of the people exercising the compulsory powers. Supposing they took from a man that, which at the expiration of 18 years would bring him in so many hundreds a year from rents of houses for which he got nothing now, and paid him upon the principle that he

was to have such a sum in present money as, accumulated at 3 per cent. compound interest, would be equal to the value of that property 18 years hence; and supposing that the money so paid were re-invested directly in the same kind of property as that which was taken from him, he would get a larger profit by the transaction. On page 64, Mr. MATHEWS calculated the present values of a 10 years' annuity by three different methods, and made upon it the following remark:—"Discarding the second calculation as obviously unsound for the reason previously stated, and comparing the first and the third together, we have respectively £736 and £426 as the value of the annuity, and £930 and £1,240 as that of the reversion. The differences are so large that it is surprising that instructed persons can be found, of whom some take the one view and some the other, and yet I have heard both urged by surveyors with much plausibility, according to the bias their judgments had received from the interests of their clients."

He (Mr. RYDE) had never heard the middle calculation urged at all, that is, taking the present value of the reversion and the present value of the annuity also, on the 3 per cent. tables. He had never heard of a valuation being made for an annuitant so low as £426. Whatever might be the perishable character of the house that they were valuing the man who had got it for the first 10 years had the greatest chance of the house standing during his time, all risk of its standing in the future, beyond 10 years, was on the part of the reversioner.

Mr. MATHEWS: You will find that allowed for further on.

Mr. RYDE said they had been dealing with this as though they were dealing with an income of £100 a year; but they found it was afterwards broken up in this way, viz.:

	£
"Interest	50
Repairs	15
Sinking fund	3·3
Compensation and contingencies .	31·7
	<u>£100·0"</u>

The universal practice of London surveyors was to take out repairs before they capitalized a leasehold *rental*; otherwise the calculation would be fallacious; therefore the £15 put for repairs very much complicated the question.

Mr. MATHEWS said there was another part where the repairs were calculated first.

Mr. RYDE: The £15 was clearly taken out for repairs here. It was on page 68. He should hesitate to say more if it were supposed that he took exception to the views of anybody; but they were discussing what was right and what was wrong.

Mr. MATHEWS said there was a calculation on page 68 where the repairs were allowed.

Mr. RYDE said that introduced a new element.

Mr. MATHEWS requested Mr. RYDE to read the first paragraph on page 66.

Mr. RYDE read the passage, and said he did not see that that altered what he had said, viz., that the allowance for depreciation and repairs was to come out of the £100 a year. The £100 was not the net rent if it had to provide for repairs, and London valuers did not capitalise house rents, except upon the principle of first deducting something for repairs. That they sometimes did not deduct enough, he admitted, but the principle of the thing was not disputed. It was not to be considered as income, either to the annuitant or the reversioner, if there was not an average allowance made for repairs.

Passing from the Paper to the discussion which ensued, he would call attention to the instance brought forward by Mr. SMITH—that in the year 1840 the City of London had a leasehold estate which produced an income of £47,500 per annum, held for a term of 99 years, of which 27 were then unexpired. There seemed to have been a proposal that the City should acquire, and the Ecclesiastical Commissioners should sell, the fee simple, which was valued at £156,700, and that sum was agreed to be accepted. It was necessary to go to Parliament, and during the passage of the Bill the parties saw fit to stop the sale, and the Ecclesiastical Commissioners retained the property. The estate was held till 1867, when the lease fell in. Mr. SMITH argued that this sum of £156,700, invested in consols at compound interest, for 27 years, would come to about £400,000, the interest on which was £12,000 a year; whereas the Commissioners had now got an estate in the City which brought them in £36,000 a year. Now, so far, this only proved that investments in landed property, in centres of large populations, were the best that could be made; for no one could doubt that the reason why this comparatively small income had grown to a large one, was the great improvement of property in the City, which within that time might have been doubled and trebled in value; moreover, the £400,000 might be invested in a security to produce 6 per cent. instead of the Funds at 3 per cent.; therefore, that did not prove anything in connexion with the subject they were discussing.

He would now briefly refer to the third historical fact related by his friend. On this Mr. SMITH said,—“The third case would take but a very short time. In the spring of 1869, Mr. FOWLER, of Sheffield, was concerned in the sale, to a railway company, of reversions of houses worth some £3,000 or £4,000 per annum. He

took the same views as their friend, Mr. MATHEWS, had been so good as to put before them, and he (Mr. SMITH) was called in, as an expert, to support those views; but before he was called in, the umpire had been chosen; and, though they gave their evidence, they knew perfectly that they had not the slightest chance of a decision in their favour; for the umpire had been going on the opposite system for 30 years, and could not change and stultify all he had ever done." That was the case, no doubt. The umpire was Mr. GEORGE POWNALL, who took, in his (Mr. RYDE's) opinion, a perfectly sound view of the matter. They might put it in this simple way. Take Mr. MATHEWS' £100 a year as their basis, which was to come from houses after all repairs were deducted. Say the reversion was deferred for 18 years; use the 6 per cent. tables, the income would be worth 10·8 years' purchase or £1,080, assuming the ground rent for that time to be a peppercorn. The £100 a year in reversion would be worth £590, making a total of £1,670, the value of the property. The question for this Institution to satisfy itself upon, was—should the reversioner to this £100, after 18 years, have more than £590 for his interest?

The Lands Clauses Act enabled him to re-invest the purchase-money at the cost of the parties exercising the compulsory powers. He also got 10 per cent. for the forced sale, to insure him against all loss of interest between the time of sale and the re-investment. He suggested that if a reversioner were compensated on Mr. MATHEWS' principle, he would be able to make a large profit, because, as soon as the compensation was paid, he would re-invest the money in the same kind of property as that which had been taken from him. This 6 per cent. property was always to be bought in the market. They had only to look at the newspapers and they could always find it. This was a practical

question which the Members should discuss. He contended that the fair way of acting was to continue the practice as it had been conducted for many years. It worked no injustice to anybody, and he said that if they were to diminish the payment to either party, it was not the lessee in possession who should be subject to the diminution.

Mr. P. D. TUCKETT (Member) said he thought Mr. MATHEWS had fully earned the thanks of the Institution, for what he claimed as his object in introducing his Paper. The calculations he had put before them were not, as he had said, new in principle; the practice of taking the rate of interest which a purchaser would expect to make of his investment money, at a different rate from that of the sinking fund at compound interest, and the somewhat analogous plan of calculating the value in fee of the property at one rate, and then dividing the two interests at a different rate of interest, had been in use for many years; but these views were brought out and explained with remarkable clearness, and he believed the calculations to be correct in themselves. He thought also the way in which prospective increase or decrease in value was dealt with, was very clear and useful. The one point on which he should be inclined to join issue with the author, was contained in a single sentence on page 59, viz.—“The market rate of compound interest has for many years ranged from 3 to $3\frac{1}{2}$ per cent.” That statement, in one sense, might be true in the abstract, but it was calculated, he thought, to mislead, especially in looking at the results deduced in the Paper.

In all these calculations, Mr. MATHEWS started with the apparent assumption that the object of a reversioner was to re-acquire a property precisely similar to that with which he had parted, and not to have a sum in hand which would produce a *present* income; and that the leaseholder, on the

other hand, was not wishing to remain a leaseholder for the given term and no longer, but to exchange for a smaller income in perpetuity. The possessors of these interests were, apparently, conceived by Mr. MATHEWS to be a much more prudent and self-denying set of people, and much more considerate for their successors, than he (Mr. TUCKETT) had found them in his experience. He had more often met with leaseholders who did not mind limiting their estate, and if they got their 6 or more per cent. for their term of years, did not heed the fact that there was not much to go to the successors. He had also met with reversioners who were willing to sell, even at a sacrifice, for the sake of present income; and these things undoubtedly affected the market value of the two classes of interest to be dealt with.

The assumption that the rate of compound interest (as stated in the Paper) was 3 or $3\frac{1}{2}$ per cent. was true only as regarded the interest of money in consols and new 3 per cents. He would consider that the English Funds were the only security in which they could invest an exact sum down to an odd sixpence, and at an exact date. But from a more general point of view, they must be regarded as a fancy investment, having a distinctly artificial value. This fact was due, in the first place, to the action of the Court of Chancery, by means of which large sums were compulsorily invested in the Funds, thus tending to raise the prices; again, through the action of trustees, who in many cases were greatly restricted as to other convenient modes of investment, other large sums were placed in the Funds; and over and above that, their extreme convertibility—the power of sale at a moment's notice, and at a minimum of expense—were their great charm, and made them a most excellent investment for sums of money, held as reserved funds to be available at any time on very short notice, and when the rate of interest was of less consequence than the

power of using the money at any moment. These three causes, no doubt, raised the prices of Government Stock considerably above the point warranted by the mere guarantee of security which it afforded. But for storing up an accumulating fund, when none of the money could be wanted again until a distant and previously fixed period, the power of selling out at any moment was of no advantage, and, therefore, the Funds did not seem a suitable or judicious investment for such a purpose. Again, even supposing that, for the sake of exact accuracy in amount, the interest were invested yearly or half-yearly in consols, it by no means followed that the principal sum should also be so invested; or that, whenever the interest had accumulated to any extent, a round sum should not from time to time be transferred to something else,—so that a very small margin invested in consols would suffice to ensure mathematical accuracy in amount. He thought, therefore, that to go to the Funds for an instance of compound interest was a mistake, having regard to the fact that many of the best railway companies paid 4 to $4\frac{1}{4}$ per cent. on debentures; debenture stocks $4\frac{1}{4}$ to $4\frac{1}{2}$ per cent., and Indian Government securities up to 5 per cent. In ordinary calculations, it would be quite fair and right to take the rate of compound interest as varying between 4 and 5 per cent., especially considering that in many cases something should be allowed for the reversioner's desire to get a present income, and not to re-invest any income at all; and some much higher rate of interest than 3 per cent. would generally meet the practical justice of the case. If Mr. MATHEWS' calculations were modified accordingly, the results arrived at would be materially altered, and, as he thought, rendered more equitable.

The question was well illustrated by Mr. SMITH's remarks on the previous evening. If, in the instance he gave, the

Ecclesiastical Commissioners, in the year 1840, were desirous of saving the whole of their income for 27 years, they could not possibly do better than hold a reversion for that exact period; and to advise them to sell it would have been to counsel them to commit an act of folly. But in that case surely no such transaction would have been thought of; and if they *did* want to acquire and spend a present income, to compare the result with a re-investment at 3 per cent. compound interest, would be inapplicable. He confessed, however, that he thought the simple 6 per cent. calculation somewhat hard on the reversioner in any case; but Mr. MATHEWS' calculation at 3 per cent. would be still harder on the other side, and no lessee would voluntarily submit to it. If it were conceded that the reversioner's object was solely to save money and remain a reversioner, the question would rarely arise at all, except in those compulsory cases to which Mr. RYDE referred; but even then, though it might be needful to pay Paul, that would be no justification for robbing Peter. The Commissioners, in the above case, as reversioners, might say, "Our object was precisely to save this money for 27 years, and we should not like to do anything else,"—an argument which, if admitted, would compel a railway company, taking property compulsorily, to pay the reversioner a fancy price. But that could not be done at the expense of the leaseholder, who had an equal right to claim his 6 per cent. for the whole period of the 27 years. The division of an estate under such circumstances, into two interests, made it, in the case of compulsory purchase, more costly, if not more valuable, instead of less so,—at least, more expensive to the company who had to buy the interests,—for the leaseholder said, "I wanted a lease," and the reversioner said, "A reversion is exactly what I required;" but in cases where the reversioner and the lease-

holder were jointly desirous to deal with each other, and each admitted that he would rather have a smaller property all to himself, then he thought the division might be upon Mr. MATHEWS' system, upon some fair rate of compound interest,—but certainly not so low an one as 3 or $3\frac{1}{2}$ per cent.

The HONORARY SECRETARY, with the permission of the Meeting, read the following communication from Mr. W. STURGE (Member):—

“I am anxious to make a few remarks on the principles laid down in Mr. WM. MATHEWS' able and interesting Paper. There is no doubt that the proper application of the tables is very imperfectly understood,—not only by the public at large, but even by members of our own profession. The common idea is that, to ascertain the value of a leasehold or reversionary estate, it is only necessary to turn to the annuity tables, and multiply the annual value by so many years' purchase, under the column of a given rate of interest. This method leads to fallacious results when applied to property capitalized at high rates of interest, because the ordinary tables are calculated on the principle that the sinking fund, which must be laid by year by year to recoup the principal money at the end of the lease, can be invested at the same high rate of interest that the purchaser requires as a return for his money. Theoretically, the purchaser of a leasehold estate or annuity should give no more for it than such a sum of money as will admit of his annually investing, in 3 per cent. consols, a sufficient sinking fund to recoup his principal at the end of the term; and the owner of a reversion should not sell it for a smaller sum than that which, annually invested at compound interest in 3 per cent. consols, will amount to the value of the fee simple when the lease or annuity falls in.

These theoretical principles are subject, however, to modification in practice by other considerations. Practically few, if any, purchasers of leasehold interests, or sellers of reversions, look at the subject from a dry, theoretical point of view. Many persons, for instance, purchase a leasehold estate or annuity with the deliberate intention of sinking their principal, tempted by the greater rate of interest they can obtain during their lifetime by investment in this description of property than in a perpetuity. The purchaser of a leasehold residence will often be content to sink his principal, for the sake of gratifying his fancy and inclination, for a term nearly coincident with that of his natural life. Again, a merchant or tradesman will often give more for premises likely to suit his trade than the tables would seem to warrant, and will expect to recoup himself by the profits of his business during the term of the lease, and not by the annual investment of a sinking fund in 3 per cent. consols. Thus it happens that, in practice, leasehold property will often realize more than the value as calculated by Mr. PETER HARDY'S tables, which show the amount a purchaser ought to give to pay a given rate of interest on his purchase-money (say 5, 6, 7, or 8 per cent.) and to recoup the principal by the annual investment of a sinking fund at 3, $3\frac{1}{2}$, or 4 per cent. I am, however, of opinion that those tables, properly applied as respects the rates of interest, usually, though not in every case, lead to a correct result.

And here I may state that I cannot agree with the rule laid down by Mr. MATHEWS for the valuation of leaseholds or annuities in page 62 of his Paper, viz. :—

“Deduct from the yearly annuity a per-centage of the purchase-money, reckoned at a rate of interest equal to the difference between that required for the perpetuity in possession and the current rate of compound interest, and cal-

culate the present values of the reduced annuity and the reversion at the latter rate."

The effect of a calculation based on this rule is to reduce the value of a leasehold below the amount which will enable the purchaser to recover his principal by the investment of a sinking fund at 3 per cent., and, according to my experience, below the real market value. The fallacy consists in discounting the value of the fee simple at 3 per cent. for the term of the lease, and taking the difference as the value of the leasehold,—a principle which, as I shall presently show, does not give the real market value of the reversion, although it may, in some cases, give the accommodation value to the lessee.

With regard to the principles which I think should be adopted in the valuation of reversions, I will assume, for the sake of simplicity, that the fee will continue at its present value. The theory laid down by Mr. MATHEWS, (which accords with the practice of the Ecclesiastical Commissioners under the advice of Mr. E. J. SMITH,) is, that the value of a reversion, in present money, is such an amount as, compounded at the current rate of interest, will amount to the value of the fee simple at the end of the term. Now I fully approve of the advice given to the Commissioners under their peculiar circumstances; acting under which, they have succeeded in so largely increasing the revenues of the church, and have been enabled to sell their reversions at prices beyond the current market value. They are the owners of the reversions of an immense number of estates, held by church lessees, who had enjoyed, from time immemorial, the privilege of a renewal from time to time at moderate fines. The leaseholds were in many cases intermixed with their freeholds, or had been occupied for many years as family residences or as places of business, or were capable of great improvement, in the hands of owners in fee simple.

The Commissioners were not obliged to sell their reversions, but were willing to do so on certain terms. They said to the lessees, "We will sell if you will pay us such a price as, invested at compound interest in 3 per cent. consols, will accumulate to the value of the fee simple at the termination of your respective leases. If you will not pay this price, we will hold our reversions, and we shall ultimately come into possession of your estates in fee." Rather than submit to lose estates, which they have been accustomed to consider their own for ever, subject to the payment of the usual fines, the lessees have, in most cases, agreed to pay an accommodation price for their reversions.

Reversions are not, however, saleable at this high rate in the open market. They involve the locking up, for many years, of capital unproductive of income. Owners are in many cases obliged to sell; lessees are not always able or willing to purchase. Public investors will not lock up their capital, and lose the income for a term of years, unless they can look forward to a larger return, or in other words to accumulating their money at a higher rate of interest than they can obtain in investments productive of immediate income. For these reasons, it is found in practice that reversions forced upon the market, are usually sold to pay a rate of interest at least as high as the fee simple estate would be expected to pay, and in many cases still higher. There is no inducement to an investor to lock up his capital in the purchase of a reversion, at a price which will admit of his accumulating his capital at 3 per cent. only, when he can always invest his money, with perfect safety, in securities which will pay him 4, $4\frac{1}{2}$ or 5 per cent.

The conclusion is, that the principle of valuation of reversions adopted by the Ecclesiastical Commissioners seems to be exceptional, and only applicable to cases in which the lessor is in a position to exact from the lessee

an accommodation price, and is fallacious when applied to the sale of reversions under ordinary circumstances, and equally fallacious when applied to the valuation of leasehold interests, as it does not represent the market value of either the one or the other.

The interesting question arises—on what principle is the owner of a reversion to be compensated who has to sell under compulsory powers? His position is, that he has nothing to do but to remain passive while his property is silently accumulating by the effluxion of the lease; his interest is, to hold his reversion until it falls in. If his reversion is forced on the market, he sells at a sacrifice; if a public company compels him to sell at the market price, with the mere addition of 10 per cent. for forced sale, he is a loser by the transaction. Unless he receives from the company such a sum as, invested in 3 per cent. consols, will amount to the value of the fee simple at the end of the term, he is placed in a worse position than if he continues to hold his reversion. I am, therefore, of opinion that in cases of compulsory sale, reversions should be calculated on the principle adopted by the Ecclesiastical Commissioners.

The conclusions at which I have arrived may be summed up in a few words:—

1. That, in the valuation of leasehold estates capitalized at high rates of interest, the tables ordinarily in use are fallacious, inasmuch as they are constructed on the principle that the purchaser can compound his sinking fund at the same rate of interest as the property is calculated to pay on the purchase-money.

2. That the tables published by Mr. PETER HARDY, showing the value of leasehold estates to pay a given rate of interest, and to compound the sinking fund at 3, $3\frac{1}{2}$, or 4 per cent., afford correct data for the reduction of such property.

3. That the principle of valuation of reversions adopted by the Ecclesiastical Commissioners, viz., a discount varying from 3 to 4 per cent., is only applicable to exceptional cases, in which the reversioner is in a position to exact an accommodation value from the lessee or to cases of sale under compulsory powers, and does not represent the ordinary market value of reversions.

4. That the principle laid down by Mr. MATHEWS for the reduction of leaseholds, by subtracting from the fee simple the value of the reversion, discounted at 3 per cent., is fallacious, and does not represent the ordinary value of leaseholds.

Mr. G. WESTBURY (Member), being called upon by the Chairman, said the matter was too deep for him to go clearly into without some consideration, but he would remark that he entirely agreed with the views which Mr. STURGE had expressed. For his own part, he had always felt a difficulty as to the correct mode of division in valuing leasehold and reversionary interests. In order to give the parties the power to obtain the rate of compound interest at which the calculations were made, he had always considered that the best investment was the Funds, because, however small the amount to be re-invested, it could be done the day it was received, with scarcely any cost. He felt, however, that the modern tables of the values of leaseholds, lifeholds, and reversions, as calculated, had been of great use to surveyors.

Mr. E. J. SMITH (Member) explained, with reference to a remark of Mr. TUCKETT's, that the estate he alluded to was not offered for sale by the Ecclesiastical Commissioners, but became vested in them immediately after the project for sale was abandoned. On another point he was not sure

whether he accurately understood Mr. RYDE. The whole essence of reversionary interest was the accumulation at compound interest, throughout the intervening period, of the present money received; but in the case of the sale to a company, the vendor was paid only for the re-investment of the sum that was received for the reversionary interest and for the expenses of such re-investment. Suppose a reversion to £3,000 to be purchased for £1,000; in order to get the sum at the end of the term, the interest accruing upon that £1,000 must be invested from half-year to half-year, and this a company did not undertake to pay for; in fact, in his argument, Mr. RYDE did not show in any shape or form how compound interest was to be obtained. If obtained from consols, the cost of the half yearly investment was comparatively small; but if real property were purchased, the first thing trustees would have to do, was to call in a surveyor, and the next thing was to have the title investigated; if they had to pay these two charges, 18 or 25 years before the time their £3,000 was to come, they would find that they would eat up the compound interest and more. He said distinctly, therefore, there was no other shape or form than consols in which they could re-invest, from half-year to half-year, to produce compound interest. If that were so, it was undesirable to have the scale on which they sold such as made them unable to obtain their principal sum in consols. He thought that a point which had been totally passed over in the argument.

Mr. TUCKETT observed that it could not be said that investments in such things as railway debentures or Indian Government securities necessitated the employment of a surveyor or the investigation of title.

Mr. RYDE said that he did not say anything about

paying the expenses of re-investment from half-year to half-year. The Lands Clauses Act provided that if, from a man under disability, an estate were taken worth, say, £2,000, he could not touch the money, but as soon as he could re-invest it he must; and the expenses connected with the re-investment were to be paid by the parties exercising the compulsory powers. The re-investment might be made in something which did not yield a present income, but had an after value,—a kind of property always to be found in the market. Such property always sold below its real value to anyone who could afford to wait till it fell in. Therefore, if a company took a property from which there was no present income, there would be no difficulty, owing to the scarcity of purchasers, in finding similar property for re-investment.

On the motion of Mr. J. H. LLOYD, the discussion was adjourned to the next Meeting.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, February 27th, 1871.

MR. JOHN CLUTTON, PAST-PRESIDENT, IN THE CHAIR,

The adjourned discussion on the Paper by Mr. WILLIAM MATHEWS, Jun., "On the Valuation of Annuities and Reversions Dependent upon Terms of Certain Duration," read at the Ordinary General Meeting, December 12th, 1870, was resumed, in the absence of Mr. LLOYD, who moved the adjournment at the last Meeting, by

Mr. R. C. DRIVER (Member), who said that those Members who were auctioneers as well as surveyors knew the difficulty that existed sometimes in realizing reversionary and leasehold interests *separately*, and more especially the former.

A leasehold interest was not calculated at the same rate as the freehold of the same property. If the freehold were calculated on the 5 per cent. table, a leasehold of the same (however long) would be calculated on the 6 per cent. table only. Investors in *leases* generally expected a large rate of interest. Investors in *reversions* were difficult to meet with, owing to the fact that there was no immediate benefit to the investors, and they must, therefore, be tempted by a higher rate of interest. Thus, ordinarily, the two sums arrived at fell very far short, in the aggregate, of the value in fee, if sold as a whole.

There were special cases where lessees and reversioners were willing to acquire their respective interests in order to carry out special improvements, and consequently a larger sum was sometimes obtained for a divided interest; but this was exceptional.

In cases where the property was specially required under compulsory powers, by Act of Parliament, the above remarks would not apply, as in the generality of cases the several interests were not for sale, the owners not requiring the money for any special purpose; they were satisfied, therefore, with the limited or reversionary interest, as the case might be.

There were bodies, such as The Crown, Colleges, The Ecclesiastical Commissioners, and Corporations (supposed to last all time), which could afford to sit out the leases, and come into the rack rental values.

In these instances, in his judgment, there was but one method of calculation, viz., to ascertain the value in fee; which might (according to the character and nature of the property) be from 10 to 20 years' purchase. He was alluding to house property where the rental values, at the end of the expiring lease, could be ascertained. Having brought this value in fee into money, it must be deferred for the unexpired interest *as money at money value*, as it must of necessity be invested in such securities, as admitted of the addition of the interest to the principal every half year, at the smallest possible cost; otherwise, the value in fee (before arrived at) could not be obtained. As a consequence, the vendors of these reversions could not invest in other than Government, or such like, securities.

Assuming the value in fee to be ascertained and then deferred on the above principle, it did not at all follow that the difference or balance between the two sums represented the value of the unexpired leasehold interest.

To his mind there could be no regular system laid down to guide valuers in finally settling the values to the respective interests of lessee and reversioner. The published tables were very useful as ready reckoners; they must be used by surveyors only as such, and not as hard and fast lines for guidance in every case.

In no case that he knew of, could the separate interests be calculated at the same rate. It was impossible, therefore, to realize (by division) the same result as would be obtained by the sale of the entirety. With reference to an observation of Mr. RYDE's, that a reversioner could re-invest in the same sort of property as that of which he had been deprived, he would remark, that The Lands Clauses Act enabled the reversioner to re-invest, and to claim the costs of the re-investment, but it did not go farther. Assuming that a man had to invest £10,000 under such circumstances, and that the interest accruing therefrom was £100 per annum, how was he to invest that £100 in the same kind of property?

Mr. RYDE explained that his observation referred to the sale of property from which no present income was derived, but the income of which was in reversion. His meaning was this—that a man could go with the money into the market and buy another property, the income from which was similarly deferred. In such a case there would be no yearly interest to invest.

Mr. RYDE, by permission of the Meeting, exhibited some tables he had prepared, to show a comparison of the several theories for the valuation of annuities and reversions, which had been alluded to in the Paper and the discussion.*

* *Vide Appendix.*

Mr. E. RUSHWORTH (Member) said, with reference to the difference between present enjoyment and reversion, that he had lately bought, on his own account, a reversion from which no income would accrue for 16 years. For this he gave a price calculated on the 6 per cent. tables; whereas, if the property had been in possession he would gladly have taken it on the 5 per cent. table. In the course of his business, he generally found that buyers of reversions in the open market, were not disposed to invest at a less rate of interest than 6 per cent. The conclusion he came to was that, if no present income was to be enjoyed from an investment, a higher rate of interest would be required to counterbalance that disadvantage.

Mr. J. OAKLEY (Member), after thanking Mr. MATHEWS for his Paper, observed that, although mathematically correct, some of the deductions would not bear the test of practice. It would be agreed that whoever purchased any property which would pass away from him in a fixed number of years, must, having first decided the rate of interest he wished for his capital, make his calculations, not only to secure that capital and interest during the term, but must also fix upon the means of getting back that capital at the end of the term, and that the only method by which it could be positively accomplished was by annually investing in the funds the balance left after the fixed interest was taken from the annual proceeds. As an auctioneer, he agreed with Mr. DRIVER and Mr. RUSHWORTH, that reversions could not be sold unless the buyer saw his way to make more than common interest of his money. It could not be otherwise, when it was considered that the buyer of a reversion parted with his capital and the interest on it, for a fixed number of years; while the buyer of a property in fee simple could deal with his purchase as he pleased, or he might,

instead, put his money on mortgage, and get it back at the end of any six months, if he wished to do so. He agreed also with Mr. E. J. SMITH and others, that any one who was a limited freeholder, and not obliged to sell his reversion, would certainly do wrong if he did so without obtaining such a sum, as vested in the Funds, would produce an amount fully equal to the value of the freehold in possession, at the end of the fixed term. Mr. RYDE had dealt with the matter as though purchasing under compulsory powers. Both he and Mr. TUCKETT assumed that those who parted with limited interests could re-invest the money they received in other limited properties, which were frequently in the market. He thought Mr. STURGE's remarks were thoroughly practical and sound, and very important for future reference.

If any limitation be created against freehold property, from that moment, the market value of the two interests, when added together, would not amount to the value of the fee simple in possession.

Nearly 20 years ago, when engaged in purchasing the land for a suburban railway, this matter was, for the first time, forced on his mind, and he then discovered the meaning of "dormant value" in the following way:—He met with land which would let on building leases (if it could have been so dealt with), at £30 per acre, and would have sold before any building was put on it at £600 per acre, with possession. This land had been let 74 years ago at the very low rent of £1 per acre for a term, of which 25 years were then unexpired. It was also underlet for the like terms of 25 years, at £5 per acre. The lessee, therefore, had only £4 per acre, and no means of obtaining more, unless he and the freeholder merged their interests. The market value of the £4 fixed rent, for 25 years, was fully represented by £56. The market value of the reversion to £600, at the end of 25 years, with an income of £1 per

annum for the whole term, was not more than £300—making £356 for the two divided interests—thus leaving the balance, £244, dormant. It had been very usual, and, he thought, proper, to divide such a dormant value between lessor and lessee, *pro rata*, to the amount of their respective interests. He had been engaged, since this discussion was commenced, with two church properties, and in each instance had purchased the freehold at a rate very much beyond the market value; but at a price which, if added to the market value of the leasehold, would come within the value of the freehold in possession.

He thought that all were under obligation to those who had introduced tables, by which any rate of interest might be applied to the capital invested, and 3 per cent. to the sinking fund left to accumulate for the term the property was held for.

His advice, after some years' experience, to all surveyors was, not to give too high prices for leaseholds, but, if acting for lessees who had the chance to purchase the freeholds, not to let the opportunity slip.

Mr. E. P. SQUAREY (Member), while admiring the very clever Paper read by Mr. MATHEWS, was afraid that it was too abstruse and intricate for the ordinary every-day purposes of business. As relative to the subject under discussion, he would mention a circumstance which occurred in his own experience. His firm was acting on behalf of a college which had a great number of leaseholds, adjoining the estate of a large landed proprietor, who asked for the terms of enfranchisement of the leaseholds. The terms named were 35 years' purchase for the freehold, in adjusting the value of the reversion to the property. They were accepted, and the business was settled; but when the matter came to be looked into, and when their inquiries brought them into contact

with the lessees, whose interests had been purchased by the landowner, it was found that the rates at which such interests were purchased were different. The leaseholds had been bought upon the basis of the 5 or 6 per cent. tables, so that the landowner acquired possession of the whole freehold on very moderate terms. He was struck with what Mr. OAKLEY said with respect to the discrepancy between the fee simple value and the aggregate value, of separate interests. His opinion was that the equitable plan, when called upon to divide interests between parties, was to calculate the values of the leasehold and the reversionary interests upon the same rate of per-centage. That method, however, was obviously inapplicable where the open market value of leasehold property only had to be dealt with; all property, whether leasehold or reversionary, would fail to realize the full price if thus estimated.

Mr. OAKLEY observed that his practice in dealing with the element of dormant interest, when acting for both parties, was to divide the sum which represented it *pro rata* between the interests, an apportionment which appeared to him to be an equitable one.

Mr. T. S. WOOLLEY (Member) agreed with Mr. OAKLEY that there were very few hard and fast lines on this question, and that each case should rest upon its special circumstances. He did not agree with Mr. SQUAREY's method, as he understood it, of calculating the values of the two interests upon the same rate of per-centage, even in the case put by him, since it was generally admitted that a deferred property was inferior in interest-producing power to the owner, to property in possession.

Mr. SQUAREY explained that his meaning was that, if

the basis of the fee simple value in possession was 25 years' purchase,—equal to 4 per cent.,—he would calculate the two interests of the parties at 4 per cent. If the two parties commanded the largest possible value by uniting their interests, he should divide them at the same rate of interest precisely, and not on the ordinary method of 6 per cent. for the reversion; and the leaseholders' interest, probably, at a lower rate. If he thus separated the two interests represented, he would fail to educe the fee simple value of £2,500.

MR. W. MATHEWS, JUN., in reply upon the discussion, said that it was no slight evidence of the importance of the subject which he had brought before the Institution, that it had occupied their attention for the whole of three Meetings; that the debate had been twice adjourned, and that some of the most eminent surveyors in England had taken part in the discussion. It might, therefore, be fairly concluded that those who differed from him had brought forward every argument that could be urged against the principles he had advocated, and that they had urged those arguments with all the force of which they were susceptible. Instead of replying *seriatim* to the successive speakers, it would be more convenient to classify the objections in the best order that he could. Before doing so, however, he would endeavour to meet the arguments of Mr. RYDE, who took exception, *in limine*, to the whole principle on which the Paper was based. Mr. RYDE had said that a man who created a limited interest in his property must be devoid of sense, but there were credible instances of testators who had left property to a daughter, for life, with remainder to her children,—and such a disposition was not usually considered a proof of mental aberration. It was true that such

limitation was contingent on the duration of life, and not for a term certain, but that made no difference in the arguments. He (Mr. MATHEWS) had taken the simpler case to keep the main question clear of needless complications.

The next argument adduced by Mr. RYDE was this, that if property were taken compulsorily from a lessee, which brought him in £100 a year for 10 years, it could not be bought for £640; that no one would give the reversioner £1,860 for his interest in it, and that we were brought back, therefore, to the common practice. That appeared to him (Mr. MATHEWS) to be simply reasoning in a circle. A compulsory purchaser of the 10 years' annuity of £100, before he concluded his bargain, would take the opinion of a surveyor as to what he ought to pay for it. Mr. RYDE, and those surveyors who agreed with him, would advise the purchaser that its fair price was £811. The purchaser gave £811 because Mr. RYDE considered it a fair price, and Mr. RYDE considered it a fair price because the purchaser gave it.

He would now proceed to consider the general objections, and would first deal with that urged by Mr. EDWARD SMYTH and Mr. P. D. TUCKETT, that under no circumstances was the sum of the values of the separate interests of the annuitant and reversioner equal to the value of the perpetuity in possession, unless the annuitant sold to the reversioner, or *vice versâ*. The defect in value might arise from the following causes:—

- 1st. The existence of a dormant interest, such as a building value, kept in abeyance.
- 2nd. The disadvantageous restrictions affecting the limited interests and diminishing the facility of their sale.
- 3rd. The anxiety of reversioners to commute their

interests for cash, in order to obtain present income, and the general willingness of mankind to dissipate their principal, without caring for their successors.

The case of a dormant interest he had treated separately and he did not suppose it to be referred to, either by Mr. SMYTH or Mr. TUCKETT.

The restrictions affecting the sale of the limited interests would not obtain in the case of a reversioner who refused to part with his reversion, except at its value to hold. It was the theoretical or holding value which he was discussing throughout. That would apply in every case of a compulsory purchase, and in every case of a non-compulsory purchase in which the seller of the reversion was legally incapacitated from alienating his principal. Those two classes would cover very nearly the whole ground of the sale of reversions. But if V, the owner of a reversion, said "I am willing to sell," and P said "I am willing to buy a reversion at such a price as a valuer shall say is fair between us," then he thought that the valuer would do V an injustice if he fixed a smaller sum than would produce to V his principal, if he elected to hold it. That he conceived to be admitted on almost all hands. The question disputed was, the proper rate of cumulative interest. No doubt if P happened to know that V was a needy man, and took advantage of his knowledge, he would buy the reversion at far less money; and Mr. TUCKETT's objection really amounted to this, that it was the duty of a surveyor, in valuing an interest, to take into consideration the financial exigencies of the vendor. This knowledge, although of the first importance to the negociator, did not, he submitted, form any part of the proper business of the valuer.

It was agreed, both by Mr. EDWARD SMYTH and Mr. TUCKETT, that the selling value of a reversion was less than its holding value, but on the value of the annuity their opinions exhibited a highly instructive divergence. According to Mr. SMYTH, the selling value of an annuity was less than its theoretical value; while, according to Mr. TUCKETT, a purchaser did not expect the reproduction of his purchase-money at the end of the term, but would actually give a high price for an annuity, and rejoice in the opportunity of depriving his successors of any enjoyment of his property. Mr. TUCKETT urged, in support of this view, that leasehold houses were frequently purchased by persons who never thought of laying aside a sinking fund to counterbalance the annual depreciation of the leasehold interest. He (Mr. MATHEWS) answered that, whenever such leaseholds were held by public companies, the practice of laying aside a sinking fund was universal. In most other cases, the purchasers of such interests were persons who insured their lives, and who invested annual savings in other descriptions of securities. Mr. TUCKETT, while protesting against the common doctrine that the purchaser of an annuity expected to get back his purchase-money when he lost the annuity, having given them no hint whatever of how he would value the interest of the annuitant, he (Mr. MATHEWS) should, therefore, until better advised, believe the doctrine to be a true one, and proceed to consider by what process the purchase-money was to be reproduced.

P, the purchaser, he would suppose, had 1,000 sovereigns, which he wished to invest in a 4 per cent. security (say well-secured freehold ground rents), to pay him £40 a year; V, the vendor, who held ground rents on a 10 years' term, offered £1,000's worth to P, which P agreed to buy, if he could do so on equally fair terms as those on which he could

purchase the perpetuity. In the latter case, he would have in his possession, at the end of 10 years, what he could sell for £1,000. What P parted with when he bought the annuity was £1,000 in cash; what he had to get back again when the annuity fell in was £1,000 in cash. The problem was, how to do it? The nature of the property from which he got his interest had nothing to do with the matter. P, if he were a wise man, would go to an insurance office and ask for what annual payment the office would pay him 1,000 sovereigns at the end of 10 years. He would probably be informed for £87, the sinking fund which, at 3 per cent. compound interest, would accumulate to £1,000 in 10 years; and he would exact from V £87 a year in addition to the available interest on his purchase-money. If P were an unwise man, he would consult a surveyor taking Mr. RYDE's view, who would advise him to make his re-investments in ground rents, in which case they would accumulate at 4 per cent.,—the sinking fund would be £83 a year instead of £87, and the vendor would have the benefit of the difference. At the end of the first year, P would get his sinking fund of £83, and would look out for a rent-charge of £3 6s. 5d. If he were lucky enough to find one, he would call in his surveyor to advise him that it was secured, and his lawyer to investigate the title and make his conveyance, and after he had acquired possession of his £3 6s. 5d. per annum, he would have to pay professional charges to the tune of 20 guineas or thereabout. As this process would have to be repeated every year, at the end of the term he would find himself some £200 out of pocket, and, no doubt, would regard his professional adviser with feelings of fraternal affection.

Mr. RYDE observed that Mr. MATHEWS was not stating correctly any argument he had used in the discussion.

Mr. MATHEWS said that he had so understood it. [Re-

suming] "But," said Mr. TUCKETT, "we must not suppose that P's first investment was restricted to the £83; he would doubtless have many other sums of money to invest concurrently with it." So that, while Mr. TUCKETT, to make good one part of his argument, assumed that P was a needy man and bought an annuity simply for the purpose of spending it, to make good another, he assumed that P was a wealthy man, whose excess of income over expenditure was sufficient to enable him to make large yearly investments. [Mr. TUCKETT demurred to this interpretation of his argument.] Precisely the same reasoning applied to the case of a reversion. When a man sold the reversion to 4 per cent. property, he sold, not the property itself, but simply the right to possess it at a given future time. That right would be worth a certain sum of money. Whatever disadvantage attached to a 4 per cent., as compared with a 3 per cent. property, was allowed for in estimating its capital value, and there was nothing further to consider but the right and proper method of causing one sum of money to grow *into* another. Suppose it was wished to calculate the present value of the reversion to a 5 per cent. villa residence, worth £4,000 at the end of a 46 years' lease. The present value, reckoning compound interest at 5 per cent., would be £400. If the popular rule were good for anything, all the re-investments ought to be made, not only in 5 per cent. buildings, but in £4,000 villa residences. The seller of the reversion must, therefore, have £3,600 in spare cash, which he must be forced to add to the £400 to purchase a villa residence for £4,000. At the end of the first year, the £400 would have produced £20. The unhappy seller would then have to find £3,980, which he must add to the £20, and purchase a second villa. At the end of the 46 years he would find himself in possession, not of a single villa, but of 46 villas, unless, indeed, the

unhappy man, long before that time, were either in his grave or in Colney Hatch Asylum. Was it possible to imagine a more complete *reductio ad absurdum* ?

The rule that the rate of re-investment should be the same as the rate of gross income, seemed to him to be a hallucination of actuaries and surveyors ; the two rates had no necessary connection with each other. He listened in vain, during the remarks of speakers on the other side, for any recognition of a distinction between the two. Mr. RYDE, indeed, said that if you took from a man the reversion to a 6 per cent. property falling in 18 years hence, and gave him such a sum in present money as, accumulated at 3 per cent. compound interest, would be equal to the value of the property 18 years hence, he would be a large gainer thereby, because he could immediately re-invest in a 6 per cent. property. It would be as just to urge that, if you took from a man a 3 per cent. property at $33\frac{1}{3}$ years' purchase, he would be a large gainer, because he could immediately re-invest in a 6 per cent. property. The difference between 3 and 6 per cent. was by no means all profit.

He would now pass to another rather important argument, with especial reference to the remarks of Mr. EDWARD SMYTH.

The point of view which he (Mr. MATHEWS) had been endeavouring to urge upon the profession was this, that when an investment was made in any description of property there was a certain sum which represented the interest upon the investment. If in 3 per cent. property, 3 per cent. would be the secure annuity in return for capital, without trouble or risk. If property were bought to pay a higher rate, the difference between the high and the low rate could not be considered interest at all ; it was, in reality, the sum received by way of compensation for all the drawbacks to which that

class of property was subject. In house property, to pay 5 per cent., the difference between 5 and 3 per cent., (that is the 2 per cent.,) was not profit that could be put into the pocket. It represented depreciation of the annual value of the house, and the risk of losing the rent from its being untenanted. Even in the best description of houses the loss of rent was often large. He thought his friend, Mr. RYDE, somewhat hard upon him for departing from the common rule adopted by surveyors, of deducting the allowance for repairs before estimating the purchase value of house property. It was evident that it did not matter whether the allowance for repairs was set forth before or after the capital value was taken, provided that, in the latter case, the number of years' purchase was proportionately reduced. In his first calculation, the deduction for repairs was made first. In the second one, this course was no longer possible, as the annual cost of repairs was assumed to be greater during the period of the reversion than during that of the annuity. He approved, however, as a rule, of making the deduction for repairs in the first instance, and the gist of his argument was, that surveyors should extend to all other allowances the same principle which they adopted in the case of repairs, and reduce to the *secure annuity* the gross income derivable from every description of property, before estimating its capital value either to annuitant or reversioner.

What rate per cent. ought, at any given time, to be considered the market rate of secure interest, was, of course, a highly important inquiry. It was evident on the one hand, that it must be less than that afforded by rent-charges, which were not always paid punctually, and could not be collected without expense and trouble. Mr. EDWARD SMYTH, on the other hand, had called their attention to a peculiarity affecting Government Stock, which he (Mr. MATHEWS) had

overlooked, viz., that it bore a high market price, not merely because it afforded secure interest, but also because it presented a ready means for investing for short terms, and at small cost, sums of money of any magnitude. He (Mr. MATHEWS) by no means intended to pledge himself to the exact rate of 3 per cent.; he had taken that figure for convenience sake, and as being not far from the truth. It would be of great assistance in determining this question if it could be ascertained on what terms insurance offices purchased annuities.

These offices, as was well known, did buy annuities,—such as those created under The Lands Improvement Act,—and that to a considerable extent. He would like to know at what rate they calculated they would get back their money; because, with all deference to Mr. TUCKERT, he thought that they did intend to get back their money, but not at $4\frac{1}{2}$ or 5 per cent.; and he should be surprised and gratified if he found that any substantial insurance office in London would be willing, if he took them £1,000, to pay him back £2,000 at the end of 14 years.

He had no intention of speaking in a tone of disparagement of Mr. PETER HARDY's tables. Those tables showed the value of an annuity, supposing that it would pay, as gross income, a certain per-centage to the purchaser, and that the purchaser could only invest at 3 or $3\frac{1}{2}$ per cent., and were exceedingly convenient in practice. His meaning was, that those tables should be used with some amount of discretion. He heard gentlemen talking about 3, 4, 5, and 6 per cent. properties; but it was important to bear in mind that such terms applied only to perpetuities; it was incorrect to assume that, because a property was worth 5 per cent. in perpetuity, it could be sold for a limited term, so as to return 5 per cent. only for the money ex-

pended. With reference to this question, Mr. DRIVER had told them that, if they were dealing with a 5 per cent. property, a purchaser would expect to get a higher rate per cent. if he bought it for a term of years only. This information was very interesting, and confirmed the views he had expressed in his Paper, which he would now endeavour to put before the Meeting in a somewhat clearer manner, by the following calculation.

Suppose it was wanted to invest a principal of £1,000 in the purchase of an annuity for 10 years, payable out of a 5 per cent. property; that the purchaser must get back his principal, and that the rate of secure interest was 3 per cent.; what ought the annuity to be? The purchaser must have from the property £50 a year as income,—viz., £30 secure interest, and £20 additional, to secure it; he must have his sinking fund of £87, and also (and of this HARDY'S table takes no account) £58 additional to secure the sinking fund. In order, therefore, to secure the interest of £30 and the sinking fund of £87, making together £117, the margin for contingencies and loss must be £78, and the yearly annuity should be £195. This amounted to £87 sinking fund, and £108 for interest and contingencies; and £100 is 10·8 per cent. on £1,000,—that is to say, the perpetuity to pay 5 per cent. is an equally fair purchase with the 10-year annuity to pay 10·8 per cent.

The CHAIRMAN, in summing up the discussion, observed that there had been so much said by the speakers on each side, that his duty was thereby materially lightened. He would commence by referring to an observation made by Mr. RYDE, as to the depreciation of property. That was contrary to his experience, both at the west and east end of London, and, indeed, over a great part of England. He be-

lieved that property had not depreciated, and was not likely to do so, but that its tendency rather, was to improve considerably in value. He knew a property at the west end of London, which, in the year 1800, produced a rental of £7,800 a year, and which was now of the annual value of £18,234. He had also returns of property at the east end, in which, though the increase was not so large, it was still very considerable, and amounted to something like 25 per cent. He thought, therefore, that in dealing with this subject, they might dismiss, as regarded house property in London, and over the greater part of England, the question of depreciation from their consideration. His whole experience was to the contrary.

Mr. RYDE explained that he had limited his observation to property situated elsewhere than in the centres of large populations, where property had no doubt increased in value.

The CHAIRMAN stated that he had cited these cases of house property, because, when negotiating with railway companies, and others, for the sale of reversions to such estates, he had frequently been met with the remark, that the property was depreciating; he had been told that the property he was dealing with was perishable, and would be worth less at the end of the term than at the period of the negotiation. As a fact, land as well as house property, had largely increased in value over almost the whole country, and he had frequently relet estates in various parts of England, after the expiration of 21 years' leases, at rents increased by 10 or 20 per cent. The importance of the instance given by Mr. SMITH, at a former Meeting, could scarcely be over-estimated. If the sum of £156,750

offered, had been accepted, the property, at the end of the term (1867) would have been represented by something like £400,000; it was now worth over a million. That trustees or individuals could have been expected to part with the estate on such terms, was hardly conceivable; and, after such a Paper as Mr. MATHEWS had read, there could scarcely be a surveyor who would advise his employers to sell an estate of the kind upon the 6 per cent. tables. It seemed to him to be most unjust, that under compulsory sale, a man should be forced to act upon a principle which would not maintain his property. It had been urged by Mr. RYDE that a re-investment might be made in a precisely similar property, and that no practical injustice would therefore be done him,—an argument which required the assumption that a man could go into the market and get similar security for similar terms, subject to the same covenants and exactly alike in all other respects. No doubt, as had been urged by some of the speakers, there was a considerable discrepancy between the theoretical and the saleable values of property; in cases of divided interest, it was perfectly true that neither leaseholder nor reversioner would receive the proportion in value which their respective interests bore to the value in fee, simply because a man who bought a property, subject to covenants and limitations, naturally required a larger rate of interest. It was not to be supposed, however, that when a man bought property at 16 years' purchase he got 6 per cent. on the average, for the rate of interest indicated a risk; and all properties which exceeded 3 or 4 per cent. in value had something about them in the nature of risk. The discussion seemed to resolve itself into this—that a properly-instructed surveyor, in dealing with a property, would be guided by all the attendant circumstances, so as to give his employer a full return for his outlay. It

had been admitted by almost all the speakers that a man could not re-invest at 6 per cent.; and Mr. RYDE seemed to be to some extent of that opinion, admitting that, although he took 6 per cent., some modification was necessary in extreme cases. Mr. TUCKETT would adopt a scale varying from 4 to $4\frac{1}{2}$; while Mr. WESTBURY concurred, to a great extent, with what was said by Mr. STURGE.

In conclusion, he would express the great indebtedness of the Institution to Mr. MATHEWS for bringing this interesting Paper before them.

APPENDIX.]

I.

II.

Years.	Ground Rent or secured Annuity, £10, Interest 3 per cent.	Balance of Rack Rent, or unsecured Annuity, £90, Interest 6 per cent.	Rack Rent in Reversion, £100, Interest 5 per cent.	Total.	Years.	Ground Rent or secured Annuity, £10, Interest 3 per cent.	Balance of Rack Rent or unsecured Annuity, £90, Interest 6 per cent.; re-investment at 3 per cent.	Reversion to £2000, discounted at 3 per cent.	Total.
10	85	662	1228	1975	10	85	611	1488	2184
20	149	1032	754	1935	20	149	925	1107	2181
30	196	1238	463	1897	30	196	1111	824	2131
40	231	1354	284	1869	40	231	1228	613	2072
50	257	1418	174	1849	50	257	1307	456	2020
70	291	1474	66	1831	70	291	1398	253	1942
90	310	1492	25	1827	90	310	1445	140	1895

APPENDIX.] III.

IV.

V.

Annuity, £100, 6 per cent.	Reversion, £100, 5 per cent.	Total.	Years.	Annuity, £100, 6 per cent.; re-investment at 3 per cent.	Reversion to £200, discounted at 3 per cent.	Total.	Years.	Annuity, £100, on Mr. Mathews's principle.	Reversion to £200, discounted at 3 per cent.	Total.
£	£	£		£	£	£		£	£	£
736	1228	1964	10	679	1488	2167	10	512	1488	2000
1147	754	1901	20	1028	1107	2135	20	893	1107	2000
1376	463	1839	30	1234	824	2058	30	1176	824	2000
1504	284	1788	40	1365	613	1978	40	1387	613	2000
1576	175	1751	50	1452	456	1908	50	1544	456	2000
1638	66	1704	70	1553	253	1806	70	1747	253	2000
1658	25	1683	90	1606	140	1746	90	1860	140	2000

AT THE ORDINARY GENERAL MEETING,

Held on Monday, March 13th, 1871.

RICHARD HALL, PRESIDENT, IN THE CHAIR.

Mr. J. H. LLOYD (Associate of the Council) desired, before the business of the evening commenced, to apologize for his absence on the occasion of the last Meeting, when he had hoped to open the adjourned discussion on Mr. MATHEWS' Paper. It was due to his unavoidable detention at a distance from London. With reference to that Paper he might now, perhaps, be allowed to say that the view he entertained on the question, which had been so ably debated, was this,—That, admitting Mr. MATHEWS' deductions to be accurate, if his premises were conceded, the question, so far as surveyors had to deal with it, was essentially a practical one, in the solution of which the ingenious arithmetical results presented in the Paper, would afford little help.

It might, for instance, be strictly accurate to say that a seller of a reversion, seeking to put himself in the same position as he would have been in if the interposed term had run out, ought not to take a less sum than that which, at compound interest on a 3 or 4 per cent. table, would produce him the value of the property as it would have been when it fell in. But a *purchaser* of a reversion would take a very different view, and, as all experience proved, would certainly not give a price so calculated. In fact, reversions, especially remote ones, were not a very saleable article, most investors being unwilling to forego present income in view of a deferred advantage. In like manner, or rather conversely, the owner of a lease or terminable annuity, would certainly not be content to sell for such proportion of the value of the property in permanency as was assigned to him by Mr. MATHEWS, and, consequently, the adoption of those scales would in practice be inapplicable to voluntary bargains. It seemed to him (Mr. LLOYD) that there were no certain rules which could be laid down for the valuation of those interests—it would depend so much on the particular circumstances of each case. In compulsory purchases, under the Lands' Clauses Act, it would, probably be safest to adopt the ordinary division, according to the tables in general use, with such variations in the per-centage for forced sale as the case might seem to require.

The following Paper was then read:—

No. 23.]

TITHES AND TITHE COMMUTATION,

By WILLIAM STURGE, MEMBER.

I propose in this Paper to give a brief sketch of the history and nature of tithes, of their commutation into a rent-charge, and of the effects of the commutation upon landed property.

Tithes were first instituted under the Levitical Law for the support of the tribe of Levi, which was consecrated for the priesthood and the service of the altar, and had no inheritance among the children of Israel. The tithe included "all the tithe of the land, whether of the seed of the land or of the fruit of the tree, of the herd or of the flock," and there was a power to redeem it in money by adding thereto the fifth part thereof. (See Leviticus xxvii. verses 30-33.)

The original institution of tithes appears, however, to have terminated with the final conquest of the Jewish nation by the Romans. The payment of tithes for the support of the Christian ministry is nowhere enjoined in the New Testament, but in the days of the Apostles, the presbyters and elders were supported by the voluntary contributions of the churches. This state of things appears to have continued until some time in the fourth century, when the people were solemnly urged by the clergy to contribute not less than one-tenth of their substance for pious uses after the manner of the ancient Jews. The contribution was, however, voluntary, and not compulsory. In the year A.D. 788, Charlemagne established the payment of tithes in France, and decreed that they should be divided into four parts, one to maintain the edifice of the Church, the second for the support of the poor, the third for the bishop, and the fourth for the parochial clergy, and this division appears also to have been the rule in England.

Tithes were probably introduced into England at the time of the establishment of Christianity among the Saxons by Augustine the monk ; but the first mention of them in any English law is in a decree made at a synod held A.D. 786, wherein the payment of tithes is strongly enjoined. About 790 the Pope sent a legate to England, who presented certain canons from Rome, in one of which was asserted

the divine right of the clergy to the tenth of the property of the laity. In 793, Offa, King of Mercia, having murdered Ethelbert, King of East Anglia, fled to Rome for pardon, and as the price gave the tenth part of his goods to the holy church. In 855, soon after the union of the Saxon Heptarchy into one kingdom, King Ethelwolf made a similar grant "for the redemption of his soul, and to the perpetual use of the holy church." Tithes now became general throughout the kingdom, but the people paid them to whom they pleased, and were induced by the promise of singing masses for their souls to pay a large proportion to the monastic institutions. This proportion became so large during the next two or three centuries, that the hard-working parochial clergy were often left without a decent maintenance. To remedy this evil, Pope Innocent III., about A.D. 1200, sent a decree to the Archbishop of Canterbury, enjoining that, for the future, tithes should be paid to the parsons of the respective parishes, and thus parochial tithes were generally established.

It would thus appear that tithes were in the first place voluntary offerings, the payment of which was enjoined, but not absolutely enforced, that by degrees the clergy claimed the payment as of prescriptive right, until at length it was enforced by the canon law.

Tithes were defined to be the tenth part of the increase yearly arising and renewing from the profits of lands, the stock upon lands, and the personal industry of the people, the first species being called *prædial*—as of corn, grass, hops, and wood, the second mixed—as of wool, milk, pigs, &c., and the third personal—as of manual occupations, trades, fisheries, &c. Of the first and second the tithe was payable in gross, of the third only the tenth part of the clear profits, and this but rarely and by special custom in some places.

Tithes were also classified under the heads of great and small, the former being the tithe of the larger products of the soil, as of corn, grain, hay, and sometimes wood, and the latter the tithe of the smaller products, comprised under the heads of mixed and personal tithe.

Previously to the decree of Pope Innocent III. the monastic orders, bishops, prebendaries, and other spiritual corporations had become possessed of a large proportion of the advowsons in the kingdom, which had thus become what is called "appropriate." These appropriating corporations usually deputed some member of their body to perform divine service and other religious duties in the parish, who being a deputy or curate was called "Vicarius" or vicar. He was paid sometimes by a stipend and sometimes by a portion of the tithes, being usually the small tithes, which were found the more difficult to collect. Hence arose the distinction between the rectorial appropriate or great tithes, and the vicarial or small tithes. Hence also the distinction between a rector and a vicar, the former being the incumbent of a living which had never been appropriated, and as such possessed of all the tithes in the parish both great and small, and the latter being possessed of the small tithes only.

In the reign of Henry VIII., who threw off allegiance to the spiritual supremacy of the Pope, and installed himself as the temporal head of the English Church, the monasteries and religious houses were dissolved by the Acts 27 Henry VIII., c. 28, and 31 Henry VIII., c. 13, and the appropriations which belonged to them, amounting to upwards of one-third of all the parishes in England, became vested in the king, who granted out the greater part of them to subjects, either for money or as a reward for services performed. Thus a large proportion of the tithes passed into the hands of laymen, called "lay impropriators," who held

them with no other ecclesiastical liability than the repair of the chancel of the church, which, it would seem, always attached to the owner of the great tithes.

A considerable extent of land in England was tithe free. This exemption attached for the most part to lands which belonged to spiritual corporations, or, being in lay hands, could trace their title to the dissolved abbeys and religious houses. The lands of these corporations did not pay tithes, the maxim being *ecclesia decimus non solvit ecclesie* (the church shall not pay tithes to the church). Some lands were also free from tithes by real composition, that is, in consequence of the gift of land or other real recompense in lieu thereof.

Some lands were also partially free from tithes by custom, that is, by the adoption from time immemorial of a *modus decimandi*, or, as it is usually called, a *modus*, in lieu of the ordinary method of taking the tenth part of the produce of the soil. Thus, for example, a *modus* for tithe hay was very common, being usually a fixed payment of so much per acre.

By far the greater part of the land of England was, however, subject to the payment to the clergy, or to laymen deriving their title from ecclesiastical sources, or sometimes partly to the one and partly to the other, of one-tenth part of the gross annual produce of the soil.

Most persons will now be willing to admit that, whether in a religious or economical point of view, a more objectionable method of providing for the maintenance of the clergy than that of tithes could scarcely be devised. The clergyman was annually brought into collision with his flock in the settlement of his dues, and endless disputes and frequent litigation were the consequence. The public services of religion were too often neglected from the ill-feeling thus engendered, and instances were not unknown of the sick

refusing the ministrations of the clergyman from the same cause. Thus was the clergyman placed in a false position, and his influence over his flock greatly diminished.

The tithe was a personal tax upon the occupier, and not a charge upon the land itself. If the land were uncultivated no tithe would accrue, but the better the land was cultivated, the greater the outlay in improvements, the larger the crops grown by the skill and industry of the tenant, the greater the amount of tithe he was compelled to pay. The bad and slovenly farmer paid little, the skilful, improving, and industrious farmer paid much. Thus the system had a direct tendency to discourage good farming and to promote bad.

To the tithe-owner, tithe was a most unsatisfactory property,—difficult to collect, and expensive to convert into money. The legal remedy for its recovery in case of dispute, in fixing the amount of composition, was to take it in kind. The occupier of land was then obliged to set out the tenth sheaf of corn, the tenth cock of hay, the tenth pail of milk, the tenth calf, the tenth pig, the tenth egg, in fact the tenth of the entire produce of the soil, which the tithe-owner was obliged to cart or drive home, to house, thresh, and market. The loss and expense entailed by this system were necessarily great. The impropiator, or clergyman, was, in fact, compelled to carry on the business of a farmer, with his crops and his stock scattered over every field of the parish. To avoid all this inconvenience and expense it was usual for the tithe-owner to enter into compositions with the occupiers, based on estimates made annually, or from time to time, of the gross produce and expenses, which estimates were a source of frequent dispute.

It was reserved for the second reformed Parliament, in 1836, to remedy the evils of the tithe system by the Act of

6 & 7 Wm. IV. c. 71, intituled, "An Act for the Commutation of Tithes in England and Wales." The provisions of this great, wise and beneficent measure are so well known to most of our Members that I need do no more than recapitulate them.

The measure received the support of the leading men of all parties. A Board of three Commissioners, assisted by several Assistant-Commissioners, was appointed to carry it into effect.

Parochial meetings were to be held to enable the tithe-owners and landowners to agree on the amount of commutation rent-charge. If they failed to agree, an Assistant-Commissioner was appointed to ascertain the average amount received for tithes in the parish for the seven years ending Christmas 1835, and to award that sum as the amount of the commutation rent-charge, adding thereto, in all cases in which the tithes were not rated to the poor, the estimated amount of rates to which the commuted rent-charge would become liable. The Assistant-Commissioner was empowered, in any case in which it appeared that the average receipts for the previous seven years did not afford a fair basis for a permanent rent-charge, to increase or diminish the amount to the extent of 20 per cent. A further power was reserved to the Commissioners to make a special adjudication in all cases in which they had reason to suspect that from fraud, collusion, or other circumstances, the receipts of the previous seven years could not be relied on.

The gross amount of rent-charge in each parish having been thus determined, the next point to be ascertained was how many imperial bushels and decimal parts of an imperial bushel of wheat could be purchased with one-third part, how many of barley with another third part, and how many of oats with another third part, at the average prices of

wheat, barley, and oats respectively, for the seven years ending at Christmas 1835, as published in the *London Gazette*. The prices were as follows, viz. :—

	s.	d.	
Wheat . . .	7	0 $\frac{1}{4}$	per imperial bushel
Barley . . .	3	11 $\frac{1}{2}$	„
Oats . . .	2	9	„

The rent-charge was to be calculated for every succeeding year at the value of the given number of bushels of wheat, barley, and oats, at the respective average prices for the seven years ending at the previous Christmas, and was thus made variable with the price of those descriptions of corn. Practically, the calculation is always made by means of the very useful “Tithe Commutation Tables,” published annually by Mr. WILlich.

The next point was the apportionment of the rent-charges upon all the lands in the parish. For this purpose, valuers were appointed by the landowner, or in the event of their failing to agree, by the Commissioners. By the 35th section of the Act, the landowners were empowered to adopt any existing map or plan and admeasurement to annex to the apportionment. If no such plan or admeasurement were adopted, it was part of the valuer’s duty to make a new survey and plan, which was submitted to a searching examination in the surveying department of the Commissioners’ office. If it passed satisfactorily through this ordeal, it received the seal of the Commissioners as a “first-class map.” It is to be regretted that a first-class map was not required in every parish, for many of the parish maps adopted for the purpose were very inaccurate; and incorrect admeasurements have been thus perpetuated, as the tithe maps have been generally adopted as the standard of acreage throughout the country.

The commutation and apportionment of the tithes

throughout England and Wales occupied many years, and it would appear from the annual reports of the Commissioners that the work is not fully completed at the present time. The magnitude and importance of the work may be seen from the fact that up to 1st January, 1869, 11,784 apportionments had been confirmed by the Commissioners. The total amount of tithe rent-charges, agreed or awarded to be paid, is classified as follows, viz. :—

	£	s.	d.
To Clerical Appropriators and Lessees .	678,969	1	1 $\frac{3}{4}$
Parochial Incumbents	2,412,404	9	11 $\frac{1}{2}$
Lay Impropiators	766,233	0	6 $\frac{3}{4}$
Schools, Colleges, &c. . . .	196,056	15	0 $\frac{1}{2}$
Total .	<u>£4,053,663</u>	<u>6</u>	<u>8$\frac{1}{2}$</u>

The variation of the rent-charge, founded on the septennial averages of the price of corn, has not been so great as the annual fluctuations of prices would lead one to expect. This arises from the adoption of septennial averages, and on three different kinds of grain. The general average for 34 years, from 1835 to 1869, has been £100 19s. 5 $\frac{3}{4}$ d. for every £100. The lowest average was £89 15s. 8 $\frac{3}{4}$ d. in 1855, and the highest was £112 3s. 4 $\frac{3}{4}$ d. in 1861, showing a maximum fluctuation of £22 7s. 8d. per cent. One object of making the rent-charge variable with the price of corn was that it should adjust itself to any general increase of prices arising from the gradual depreciation in the value of gold. This object has not, however, been attained, for the effect of the foreign competition, consequent on the repeal of the Corn Laws in 1846, has been to maintain the average price of corn very nearly at the commutation standard, whilst the price of all other agricultural produce, as well as the general cost of living, has risen greatly since that date.

The commuted tithe rent-charge differs from tithe in one very important respect. The latter was a personal tax, whilst the former is a charge upon the land itself, and it is expressly provided by the 67th section of the Act that, "nothing therein contained shall be taken to render any person whomsoever personally liable to any such rent-charge." The tithe rent-charge is consequently a landlord's tax, and a tenant is entitled to claim the amount as a deduction out of his rent, unless he has entered into a covenant to pay it. It is the practice on some estates to let farms tithe free, but this practice has not become general, although it was probably the intention of the Legislature that it should be so. The practice has the advantage of securing the landlord from the claim of rent-charge left in arrear by an outgoing tenant; but, on the other hand, the difference in value between a tithe-free and a tithable farm is not sufficiently recognized by tenants in taking farms.

The remedy for non-payment of tithe rent-charge is very simple. If the amount be unpaid for twenty-one days after it has become due, the tithe-owner may distrain the goods and chattels of the occupying tenant, first giving ten days' notice of his intention so to do, and in the event of the rent-charge being in arrear for forty days, and of there being no sufficient distress found on the premises, the tithe-owner may, under the process set forth in the 82nd section of the Act, enter into possession of the land itself, and hold it until payment has been made. The power of recovery is however limited to not exceeding two years' rent-charge.

The working of the Act has been very beneficial both in a moral and economical point of view. The clergy have been rendered more independent of their flocks, and are no longer brought into collision with them in ascertaining the amount of their dues. The rent-charge is not like the tithe, regarded as a personal payment for spiritual services, but as

a provision made by the State, and charged upon the land for the maintenance of the clergy and the performance of public worship. The influence of the clergy has greatly increased, and ecclesiastical property has been placed upon a much sounder basis. If the tithe-owner has lost his share in the greatly increased produce of the land resulting from the increased science, skill, and capital applied to its cultivation since the commutation was effected, he has reaped the advantage of a more certain and regular income, free from the odium and unpopularity of tithes, and the risk, expense, and uncertainty attending their collection.

Nor are the good effects of the commutation confined to the tithe-owner. The landowner and occupier have also participated in them. The landowner is no longer in uncertainty in ascertaining the charges upon his land, and he can therefore estimate its value for sale or letting with greater accuracy than he could under the tithe system. He is already a gainer in rent of the value of the tithe on the greatly increased produce of the land caused by the improved systems of cultivation since the commutation was effected. He can break up inferior pastures, and convert them to arable, without being liable to a doubled charge for tithes, and he can expend his money in permanent improvements, and calculate with certainty on the return.

The occupier feels that he no longer has to pay an increased charge in proportion to his capital, labour, and skill. He hires his farm with the full knowledge of the amount of the rent-charge, subject only to the fluctuations of the septennial averages of the price of corn, and he regards it as a charge upon the land which he would have to pay to his landlord in the shape of rent, if his farm were free from the impost. He can, therefore, calculate with certainty the gross rent he will have to pay, and make his bargain accordingly. He is no longer harassed with an

annual valuation of his crops to settle his composition for tithe, and with the threat of taking in kind if he does not agree to the tithe-owner's terms. Instead of regarding the clergyman as "a hard man, reaping where he had not sown and gathering where he had not strawed," he has now no pecuniary reason for collision with him, nor motive of that nature, to slight his ministrations. In short, the change may truly be said to have proved alike beneficial to the tithe-owner, the landowner, and the occupier.

TITHES.

By JOHN OAKLEY, VICE-PRESIDENT.

*Read at the Ordinary General Meeting of the INSTITUTION OF SURVEYORS,
March 13th, 1871.*

RICHARD HALL, PRESIDENT, IN THE CHAIR.

IN the following Paper I propose to give a short account of the commutation of tithes in England and Wales, under the Tithe Commutation Act of 1836, by which an annual rent-charge, varying with the price of corn, was substituted for the payment of tithes in kind; and to make some observations on the advantages which have accrued to agriculture therefrom.

Upwards of a quarter of a century having elapsed since the great bulk of the tithes in England and Wales were commuted, the payment of tithes has only practically presented itself to the majority of land agents and valuers (in making valuations or fixing rentals) as an outgoing, to be treated in the same way as land tax, parochial rates and taxes, or other fixed payments.

It may, therefore, not only be interesting, but also materially assist in discussing the question of tithes, as affecting the value of land, if I give a short sketch of their history previous to the Commutation Act.

Tithes have been defined as the tenth part of the gross produce yearly arising and renewing from the profits of lands, stocks upon the lands, and from the industry of the parishioners, payable for the maintenance of the parish priest. Although their origin in England, as well as the

division of the land into parishes, is involved in much obscurity, it appears that from about the year 1200, the parson of every parish became entitled to the tithes of all the lands lying within the boundaries of his parish, as parcel of his rectory or parsonage; and the law, settling the parochial right to tithes, has never undergone any alteration from its first establishment to the present time.

The payment of tithes to other persons than the spiritual rectors of parishes arose by reason of parsonages (which are described as certain portions of land tithes or offerings, established by the laws of this kingdom for the maintenance of the minister who has the cure of souls within the parish where he is parson or rector) being appropriated or annexed to the proper and perpetual use of a spiritual body politic or corporate, either sole or aggregate, having perpetual succession,—such as abbots, priors, deans, prebendaries, and others, who were capable of performing divine service, and who were held responsible for the administration of the sacraments and performance of divine service and religious offices in such appropriated parishes.

This was the common mode of endowing monasteries on their first foundation, and led to the appointment of vicars (who answered very much to the curates of the present day) to perform these offices on behalf of the appropriators; but this was done in so scandalous a manner, and parishes suffered so much from the neglect of the appropriators, that statutes, to remedy the evil of appropriations and in relation to vicarages and their endowments, were passed in the reign of Richard II. and Henry IV., and the appointments of vicars to appropriated rectories were made permanent. The endowments of such vicarages have, in consequence, been usually a portion of the glebe, and that particular share of the tithes which

the appropriator found most difficulty in collecting, and which was generally called privy or small tithe, the greater or prædial parochial tithes being still retained to the appropriator's own use. Hence, some vicarages are more liberally and some more scantily endowed than others, and the tithes of many things (as wood) are in some parishes rectorial and in some vicarial tithes.

Upon the dissolution of the monasteries, in the reign of Henry VIII., all the appropriated rectories along with the abbey lands came to the Crown, under the statutes of dissolutions, and were afterwards granted by the Crown, some to ecclesiastical corporations, such as bishops and deans and chapters, and others to temporal bodies politic or corporate, such as the colleges in the two universities of Oxford and Cambridge; but the greater part were granted to laymen, and such proprietors of parsonages or rectories had the same right as spiritual rectors to demand all the tithes which could not be shown to be vested in some other person, as in the common case of a vicar.

This explains how the different classes of tithe-owners have arisen, and how some tithes are payable to one person and some to another.

The persons to whom, at the present day, tithes are payable in England and Wales, may be divided as follows:—

1. Spiritual rectors, having the cure of souls within their respective parishes.
2. Appropriate rectors (that is to say), spiritual owners of parsonages appropriated or annexed to the proper and perpetual use of ecclesiastical corporations, *e. g.*—

Bishops, deans and chapters, prebendaries, &c.

3. Improprate rectors or lay proprietors of parsonages originally appropriated to monasteries, and which came to the Crown on the dissolution of religious houses; under this head are included lay corporations entitled to tithes.
4. Vicars.

The Crown is entitled to the tithes of extra-parochial places.

According to their state of cultivation, all lands in England were subject to tithes in kind, except such abbey lands as were exempt from such payments at the time of the dissolution of the monasteries, or became discharged by the statutes of dissolution; also lands in respect of which a *modus* or composition had been paid from time immemorial. To these exceptions may be added such recently enclosed lands as have been exempted, by the Acts authorizing their enclosure, from the payment of tithes by reason of allotments having been made in satisfaction of the tithes, which would otherwise have arisen from the enclosed lands when brought into cultivation.

Tithes have always been considered as real estate, and are an inheritance quite distinct from the estate of the land; they do not issue out of the land, as a rent does, nor are they appurtenant, as a common, but they are taken out of the profits of the land. For this reason no unity of possession of the land and the tithes could either extinguish or suspend them in point of right. It follows, therefore, that if a landowner sold or devised an estate of which he also owned the tithes, the tithes would not pass by the grant or devise unless expressly named.

Tithes are also divided into prædial, mixed, and personal tithes—

Prædial tithes were such as arose immediately from the soil, as corn, grain, hay, wood, and all sorts of fruits.

Mixed tithes were such as were produced by animals pastured or kept on the ground, as lambs, pigs, calves, colts, wool, milk, and eggs, being partly prædial in respect of the ground on which the animals are kept, and partly personal, as requiring more of the personal care and attention of the parishioner than the immediate produce of the soil.

Personal tithes (which hardly come within the object of this Paper) are such as arise wholly from the labour and industry of man, as tithes of mills and fishing.

Tithes, again, are divided into great and small tithes, such division (with some few exceptions and slight variations in different parts of the country) corresponding with the division into rectorial and vicarial tithes.

The great tithes consist of—

Corn and grain, under which are included wheat, rye, barley, oats, and every species of grain produced by leguminous plants, and commonly called pulse, as peas, beans, tares, and vetches.

Hay, under which is included not only the usual species of natural and artificial grasses, as clover, &c., but also all sorts of herbs and vegetable products, when they are mown and made into hay. It is, however, doubtful whether grass or other herbs, mown for green food for cattle, are included under this head.

Wood, by which is meant coppice or underwood, cut periodically, not being twenty years old.

The small tithe consists of the following prædial tithes :—

The agistment or depasturage of cattle.

This tithe was paid for the herbage and roots eaten by barren or unprofitable cattle, and not for the depasturing of

profitable cattle, as milch cows and sheep, which rendered tithes of calves and milk, wool and lambs, or for those used in husbandry, or for the benefit of the tenant and his family. There was great difficulty in ascertaining or fixing the value of this tithe, which has been stated to be a tenth of the yearly value of the land so depastured, and it was often met by the payment of a *modus*. No agistment tithe was payable for the after pasture of lands from which corn or hay had been reaped or mown, and for which tithes had been paid in the same year.

Fruit gardens. Herbs, roots, and vegetables; a *modus* was often paid for these articles.

Turnips and potatoes.

Furze and broom, except where they were burned in the farm-house, or used for husbandry.

Hemp, flax, madder, woad, teasels, and saffron.

Honey.

Hops.

Seeds—under which rape seed, cole seed, turnip seed, and clover, cinquefoil, rye grass, and other artificial grass seeds, when grown for seed, were included, and acorns and mast were tithable when gathered and sold.

And of all mixed tithes, viz. —

Milk, wool, the young of animals, viz., lambs, pigs, calves, and colts, and the eggs of hens, ducks, geese, and other tame and domestic fowls and poultry.

It remains shortly to state how tithes were to be paid. All prædial and mixed tithes were to be paid without any deduction or abatement on account of the labour and expense of their production, and it is sufficiently accurate to state that in all cases where the produce tithable could be put into such condition as to be divided into tenths, the occupier of the land was bound by law to put his crops into this form, and to give the tithe-owner such length of notice

as would enable him to come to the field, put a mark upon his share of the gross produce, and remove it.

Corn, cut and bound, was made up in sheaves of equal size, and set up in tens. Unbound corn was put into heaps of equal size, for convenience of removal.

Hay was put into cocks of uniform size.

Roots were thrown into heaps of even size when dug or pulled up.

Hops, seeds, garden produce and fruits were similarly treated.

The tenth lamb, the tenth fleece of wool, and the tenth pail of milk, or the tenth day's milk, were taken by the tithe-owner.

The agistment tithe* (which gave rise to innumerable disputes) had in most cases to be settled by valuation.

* Agist, in Law. signifies to take in and feed the cattle of strangers in the king's forest, and to gather up the money due for the same.—*Chart. de Foresta*, 9 Henry III., cap. 9.

The officers appointed for this purpose are called Agisters, or Gistakers, and are made by the king's letters patent; there are four of them in every forest, wherein the king hath any pannage.—*Mann. For. Laws*, 8 vol.

The time for this is fifteen days before Michaelmas, and as many after, when the running of the cattle cannot prejudice the game.

Agistment is supposed to be formed of the French giste, a bed, or lying-place; though Kennet takes exception to this etymon, and chooses rather to derive it from ager, the field, or feeding-place for cattle, imagining agistment to have originally been the same with agrarium, agrerium, or agroticum, the profit of feeding cattle on such a piece of ground. The term is applied to taking other men's cattle into any ground, at a certain rate per week. It is so called, because the cattle are suffered agiser,—that is, to be levant and couchant there; and many great farms are employed to this purpose.—2 *Tust.* 643.

Our graziers call cattle, which they thus take in to keep, gisements; and to gise or juice, the ground, is when the occupier thereof feeds it, not with his own flock, but takes in the cattle of others, to agist or pasture it. Agistment is likewise the profit

It will be seen from the preceding remarks that when the tithes belonged to different persons, entitled, respectively, to the great and the small tithes, one might be entitled, either by custom or principle, to the tithe of a commodity when in one form, and the other to the tithe of it when in another form, or produced by a different mode of cultivation, and the tithe-owner had no control over the mode of cultivation. Tithes were therefore a fluctuating, uncertain, and precarious inheritance, depending upon the manner in which the ground was cultivated, and the will and caprice of the owner or occupier, who could not be controlled by the tithe-owner in the mode of husbandry which he might think proper to pursue. The ground might lie fallow, or where all the tithes were not vested in the same person—as in the common case of rector and vicar—their rights might be varied by a change in the tithable produce of land, either by the ordinary course of husbandry, or by the conversion of arable and meadow land into pasture, by which the produce of the land became agistment tithe instead of tithes of corn and hay. Again, the land might be waste and uncultivated, or built upon, or converted into, a park or warren, and wholly stocked with animals, *feræ naturæ*, or it might be devoted to the growth of timber trees, or might by various other means be rendered incapable of producing any tithable matters whatsoever.

of such feeding in a ground or field, and extends to the depasturing of barren cattle of the owner, for which tithes shall be paid to the parson.

Agistment is also used metaphorically for a charge, or burthen on anything.

In this sense we meet with “*terra ad custodiam maris agista*,” *i.e.*, charged with a tribute to keep out the sea. So *terræ agistatæ* are lands whose owners are bound to keep up the sea banks.

Agistment denotes likewise the duty or levy for preparing the banks and walls in Romney Marsh, which was particularly called *agistamentum*; and the act of laying such a proportion of this duty on the several estates, was called *agistatio*.—*Spelman*.

Again, complications arose by reason of the many special customs which had existed from time immemorial whereby an annual sum was payable for all the tithes of the land (this practice, which I have mentioned before, prevailed very much in the North of England), or for some specific produce of the land, as a given sum per acre for meadow land in lieu of tithes of hay and herbage, a sum for each cow, or a given number of cheeses in lieu of the tithe of milk, and so on, and these customs or *modi decimandi*, might extend to a hundred, parish, or hamlet, or be confined to a particular estate or farm.

Such a state of things was sure to give rise to great difficulties and hardships, and fostered much ill-feeling and litigation. Disputes were constantly arising as to the validity of customs; as to whether the owner of the great or rectorial, or the small or vicarial tithes, was entitled to the tithe of a particular produce. Again, one tithe-owner might be easy in pressing his rights, and another harsh, and that without reference to the status (whether lay or spiritual) of the owner, and on the other hand, one tithe payer might endeavour fairly to set out his tithes, and another be unscrupulous in his arrangements. The difficulty and expense of collecting the tithe in kind, and the delay and interference with the occupier or tithe payer, from having to set out the tithes, led either to harsh and arbitrary agreements being entered into between tithe-owner and tithe payer for a money payment in lieu of tithes in kind, or induced the tithe-owner to lease his tithes to some middle man, whose only object was to get the most for his money.

Besides this, the collection of tithes in kind prejudicially affected agriculture. Owners and occupiers of land were unwilling to make improvements, or to adopt better modes of cultivation, because the tithe-owner at once became

entitled to a tenth of the improved crops, without having contributed to the outlay by which such improvement was effected. It might happen also that where a change of cultivation was desirable, it was prevented because such land might, being pasture, be covered from agistment tithe by the payment of a small *modus*, and would, on being broken up, be liable to tithe in kind for corn.

The subject of tithes as affecting land, and the best mode of commuting them, forced itself on the consideration of all who were interested in the well-being of the country, and who desired to see an improvement in the state of agriculture. The discussion of the subject was much assisted by a Parliamentary enquiry, and by the writings of the Rev. Professor JONES, who was afterwards appointed one of the Tithe Commissioners.

This led to the passing of the Tithe Commutation Act in 1836.

The objects of the Act may be shortly stated as follows:—

To convert all the uncommuted tithes in England and Wales into a corn rent-charge, payable in money, according to the value of a fixed quantity of corn, as ascertained from year to year, by the average price of corn for the seven years ending at the preceding Christmas.

The mode of making the conversion was:—

- (1) To find the gross average money value of the tithes of each parish for seven years preceding Christmas 1835.
- (2) To apportion the amount of that value upon the lands of the several tithe payers.
- (3) To ascertain how much corn could be purchased with such amount: one-third to be laid out in wheat; one-third in barley, and one-third in oats, at the average price, ascertained by the weekly official returns, for the seven years

preceding Christmas 1835, and which was 7s. 0 $\frac{1}{4}$ d. per bushel for wheat, 3s. 11 $\frac{1}{2}$ d. for barley, and 2s. 9d. for oats, and

- (4) To make payable the value of the same quantity of wheat, barley, and oats, at their average prices, founded on a like septennial calculation.

The Act provided two methods of commutation.

1st. By parochial agreement, voluntary on the part of a majority of persons having two-thirds' interest in the lands, two-thirds' interest in the great tithes, and two-thirds' interest in the small tithes, and binding on the minority, if unappealed against, or if no sufficient cause of objection were shown.

2nd. By compulsory awards.

A central Board of Commissioners, with Assistant-Commissioners and other officers, was constituted to regulate, approve, control, and effect these agreements and awards.

Parochial agreements and apportionments became binding upon being confirmed by the Commissioners, and compulsory awards and apportionments were made by them. In both cases the gross value of the tithes, payable by a parish or district, had first to be ascertained.

In the case of a compulsory award, the Commissioners were required by the Act to take seven years' value of the tithes, if paid in kind, or the composition (if any) paid during the like period, as the basis of the commutation, and power was given to them to increase or decrease the amount of computations thus ascertained by one-fifth, or 20 per cent., so as to bring the average nearer to the fair value of the tithes. In case of fraud, collusion, or under special circumstances, a discretion was given to the Commissioners to disregard the compositions altogether, and to adopt an average based upon payments from similar lands in the neighbourhood.

After the gross value of the tithes had been ascertained, the landowners had to appoint valuers to apportion the amount amongst them. If no voluntary apportionment was made in six months, the Commissioners proceeded to make such apportionment. As soon as the apportionment was complete, and the Commissioners had confirmed the same, it became binding on all parties, and fixed the value of the rent-charge to be paid in future, in lieu of the tithes, by the several landowners in the parish,—varying yearly with the septennial average price of grain. Two modes of apportionment were adopted, one by which the rent-charge was fixed on each field, the other on each farm or occupation as it happened to exist at the time. General experience has conclusively shown that the first mode is the better plan, and should have been adopted in all cases. If an Act were now passed to enforce the alteration of all estate apportionments into field apportionments, much good to the landed interest would arise therefrom.

The case of every kind of tithe—*moduses*, exemptions, and the like—were provided for in the Act; facilities were given for referring all disputes to arbitration, or to an immediate and cheap mode of trial, or to the Commissioners, and for charging the expenses of commutation on the livings of incumbents and on lands of owners having only limited interests.

Special provisions were inserted to meet cases when the tithe is not of an ordinary nature—such as hops, fruit, garden produce, and wood—and also for enabling special apportionments to be made so as to discharge any part of the lands which the owner might desire from the rent-charge, and to fix it on other lands, provided the annual value exceeded by three times the value of the rent-charge.

In the case of ecclesiastical tithes, land not exceeding 20 acres might be given by way of commutation.

Certain consents of the patron and bishop were made requisite to commutations of ecclesiastical tithes by voluntary agreement.

No one was to be personally liable for the rent-charge, but the remedy was by distress and entry on the lands out of which it issued, and not more than two years' arrears were recoverable.

Subsequent legislation, which has not altered nor affected the principle of the original Act, relates principally to details, such as the adoption and verification of maps, the adjustment of boundaries, giving facilities for the merger of tithes where the landowner and tithe-owner were the same, extending the facilities for giving lands instead of tithes, and regulating the tithes as to fruit and hops. Giving powers for exchange of glebe lands, for altering apportionments, and the redemption of rent-charges.

The Tithe Commission is now consolidated with the Copyhold and Inclosure Commissions.

In effecting the commutation of tithes, points of considerable difficulty and importance arose, and had to be considered and disposed of.

In fixing the gross value of the tithes for the purpose of commutation, the tithe-owner had to show what he had received in cash payments from the occupiers, or what was the net amount he had received for the tithes taken in kind, and whether, from any circumstances, such sums did not represent the full value of the produce.

In many instances heavy money compositions had been paid, the astute tithe-owner obtaining full money value for his property, because the occupier who farmed well wished to gather ten-tenths of the produce grown, and did not deduct the cost to the tithe gatherer who had, in collecting a load, to travel over ten times more ground than the farmer, and to convey the same to a distant barn instead of to an adjoin-

ing homestead; on the other hand the compositions might have been moderate, and no fair guide to a permanent settlement. If the tithe-owner had taken his tithes in kind, he might show that the lands had been underfarmed during the seven years; on the other hand, the landowners might show that the compositions had been very full in amount, or that the farming or manuring of the lands had been above the average during the seven years.

The vicarial tithes were seldom taken in kind, and as London increased, and the sale of roots and garden produce increased, the owners of these tithes obtained high money settlements. Although the taking of tithes in kind was not uncommon, it was more generally practised in Kent than in any other county.

Difficulties in arriving at the gross value of the tithes arose, in many instances, where the corn tithe was collected in kind, from the fact that no accounts had been kept, except of the corn sold, and the value of the straw, and the costs of collection had to be estimated. In other cases compositions had been paid, with an agreement that the tithe-owner should pay no parish rates, and, in those cases, sums equivalent to such rates had to be added to the average compositions. In many instances the tithe-owner sold the tenth of the crops at harvest, by valuation, to the occupier or tithe payer, allowing the straw as an equivalent for the costs of collection, cartage, preparing for market and selling. In this way the tithe-owner obtained some advantage, for although the straw might pay the farmer for collection, &c., the tithe-owner could not have sold the straw for as much by 10 or 15 per cent. as the costs of collection, preparation for market, and selling would amount to.

A great number of attempts to increase the gross value of the tithes were disputed, and very few of the attempts

made to reduce the gross value were successful. The tithes of every parish were commuted, with various additions to the compositions, and were confirmed by the patrons of the livings and the Commissioners.

These difficulties, the number of disputed cases, and the necessity there was for comparing the results as to adjoining parishes, where the tithes of one had been settled by composition and the tithes of the other taken in kind, caused experienced valuers to be largely employed, and many practical deductions were arrived at, which tended to facilitate the process of commutation. Other difficulties arose, such as are pointed out in Mr. BENNET'S (of Tutbury) letter to the Tithe Commissioners, relating to a parish, of which a considerable part was old turf land, covered from grass and agistment tithes by a small *modus*, but liable to corn tithe if broken up, and which old turf land would, on the commutation of the tithes, become liable to an increased burden.

The work of this important measure was, nevertheless, carried on with less difficulty and irritation than was anticipated. It appears from the reports of the Commissioners that very little discontent existed between the landowners and tithe-owners as regarded the result of the commutation; and it is mentioned in the report for 1844, that the rent-charges, on the average, did not exceed one-tenth of the rent, or of the net value, instead of amounting to one-tenth of the gross value of the produce. There was this hardship, however, to a tenant, in some cases, that he was, by reason of the commutation, called upon to pay a rent-charge upon the whole of his land when previously he had paid tithe on only a small portion, in consequence of the way in which his farm was cultivated.

The great bulk of the tithes were commuted by the year 1846; and the reports of the Commissioners call

for no further remarks beyond this, that they show the slow but steady progress made in the work, and occasionally point out difficulties, as to details, which were removed by subsequent legislation.

In this manner all the tithes previously collected in kind were commuted for annual rent-charges, varying with the price of corn, leaving the extraordinary charges in respect of hops and fruit to be added when such crops are grown, and in those cases where a *modus* or composition had from time immemorial been paid in lieu of tithes in kind, such *moduses* were confirmed.

The reports of the Tithe Commissioners show the number of awards and apportionments of tithes, made and confirmed, and the number of cases in which tithes have been merged.

ABSTRACT OF TITHE PROCEEDINGS, 1869.

Agreements received . . .	7,070
„ confirmed . . .	6,778
„ superseded by awards .	291
	7,069
„ not completed . . .	1
Awards made . . .	5,648
„ confirmed . . .	5,450
„ superseded by agreements .	165
	5,615
„ not completed . . .	33
Total number of agreements and awards confirmed . . .	12,228
Tithe districts in which the rent-charges have been disposed of by merger or redemption .	414
Apportionments received . .	11,788
	12,202

Tithe districts in which the rent-charges remain to be disposed of	26
Apportionments received	11,788
„ confirmed	11,784
„ not completed	4
Altered apportionments received	4,023
„ „ confirmed	3,489
„ „ withdrawn	336
	3,825
„ „ in progress	198
Applications for the exchange of glebe lands received	1,173
Exchanges confirmed	1,057
„ withdrawn	84
	1,141
„ in progress	32
Applications for the redemption of rent-charge received	1,324
Redemptions confirmed	931
„ in progress	393
Applications for the conversion of corn rents received	9
Awards completed	5
„ withdrawn	1
	6
„ in progress	3
Mergers of tithe or rent-charge received	14,915
„ „ confirmed	14,913
„ „ in progress	2

There are the materials in the office of the Tithe Commission, from which valuable tables might be arranged, showing the state of cultivation of each parish, and its division into pasture, meadow, or wood land, and the nature and amount of tithes payable, but as yet no attempt has been made to arrange these statistics, which would be invaluable for comparison with the state of cultivation in the present day, and for estimating the improvement in agriculture. No tabulated statement has been compiled showing either the number of acres of land in England and Wales, subject to or free from tithe, or the sum paid per acre or in gross, in respect of tithes.

The maps and terriers, made for the purpose of tithe commutation, have proved very useful to the general landed interest, and would have been much more so had the Commissioners in all cases insisted on first-class maps, and imposed the extra cost on all the landowners.*

It now only remains to consider what have been the advantages or disadvantages of the commutation of tithes, as respects the tithe-owner, the landowner or occupier, and agriculture itself.

To the tithe-owner the advantages have been great. He has been relieved from the burden of collecting the tithes in kind, or from making arrangements which were, in most cases, the cause of ill-feeling and litigation, and instead of an uncertain income (which might be seriously affected by a slight change in cultivation) he has a fixed one, easy of collection, and varying only with the price of corn, and made a first charge on the land itself. On the other hand, he is precluded from any increase in the value of his property

* The power of using any maps the landowners wished to adopt was fixed by Act.

by reason of improved cultivation, but as he does not contribute to such improvements, this does not appear to be unreasonable.

Any hardship arising from an almost fixed rent-charge, which does not increase rateably with the value of land, might be obviated by increased facilities being given to tithe-owners to sell their rent-charges, preference of purchase being given to the landowner, out of whose lands the rent-charge issues, and for enabling ecclesiastical owners, and those having limited interests, to re-invest the purchase-money in land.

To the landowner and occupier the advantages are, that they are relieved from the trouble of setting out the tithe of their crops and produce before dealing with the bulk; they can deal with their crops and produce in the most advantageous way, without any restriction, and can adopt any mode of cultivation without finding themselves liable to an increased charge in the way of tithe. In addition to this, both landlord and tenant can improve the land by drainage, manuring, and in other ways, without feeling that the results of such outlay become taxed with the payment of tithe to one who has contributed nothing towards such results.

The adjustment of rent is also much simplified by the commutation of tithes.

The rent a tenant can afford to pay per acre for his farm is shown by first setting out its average annual gross produce in money, and deducting therefrom the tithe rent-charge, if payable by him, the rates and taxes also, and the costs of cultivation, not forgetting the interest on the capital required in cultivation and tenant's profit. The remainder will be the fair rent payable to the landowner. Whether the tithe rent-charge amounts to a shilling, or any other fixed charge per

acre, the sum is easily worked; but if the amount the tenant can afford to pay the tithe-owner for the tenth of his gross produce were to be deducted, a more elaborate calculation would have to be made, and thus fixing the landowner's rent would be a matter of corresponding difficulty. In fact, none of the land agents and surveyors, whose education commenced thirty years ago, have been called upon to make such calculations. It may not, therefore, be out of place to put before you in plain figures the advantage which would result to the tithe-owner, if his tithes were re-valued according to the present produce of the land. Should I succeed in showing that the present money payments do not represent what the tithe-owner would have now obtained had there been no commutation, it will not be with any idea of suggesting that the commutation was unfair, and ought to be revised. I know that such results would never have been produced if the tithe-owner had continued to collect his tithes in kind, and so reap the benefit of the skill and capital of the occupier. I may, however, possibly show that the landowners and occupiers have so materially benefited by commutation, that they may easily, and without cost to themselves, make some small concessions which will benefit all tithe-owners, and especially the clergyman of the parish, when he is the owner himself.

For convenience and simplicity of calculation I purpose blending rectorial and vicarial tithe in the following statements.

I will take, first, arable land of the poorest quality, which is under cultivation by the plough, and then arable land of the highest quality, both descriptions being farmed without the application of any manure beyond that made from what the lands themselves would produce.

Take 100 acres of poor arable land on turnip soil, and the cropping to be as under :—

25 fallow with turnips,			
12½ fallow again or tares,			
12½ barley,			
12½ clover,			
12½ tares or fallow,			
12½ wheat,			
12½ oats,		£	s. d.
being 62½ of green crops at 10s.	31	5	0
12½ wheat, 2½ qrs. at 56s. 3d.	87	17	9
12½ oats, 4 „ 22s.	55	0	0
12½ barley, 3 „ 33s. 9d.	63	5	7
	£237	8	4

I calculate that the sheep jobber would purchase the feed of 62½ acres of turnips, or rape, or tares, or clover, he finding all required, including labour, at 10s. per acre, and if so, the net yield to the farmer would be £31 5s., and the tenth of this sum would be the agistment value of these crops. I apply, then, the prices fixed by the Tithe Act to such crops as this land thus farmed would produce, viz., 2½ qrs. of wheat, and 4 qrs. of oats, and 3 of barley, and the result shows the produce of the 100 acres, without the straw, to be £237 8s. 4d., or £2 7s. 5d. per acre. The tenth of which, or 4s. 8d. per acre, is the money value of the tithe without the straw in the fields where the grain grew. The tithe-owner could not collect the tenth of these crops for the value of the straw; hence, 10 per cent., or 5½d. should be deducted from the 4s. 8d. per acre, the balance, or 4s. 2½d. per acre, represents the money value per acre, according to commutation prices, of the tenth of the produce of this 100 acres of land.

If the 100 acres of land were heavy clay the result would be similar in money, inasmuch as the growth of corn

in bushels would be larger and the value of the feed from the green crops less. Where land is fairly tilled with the plough and all moved thereby every year, except the land in clover or other artificial grasses, the tenth of the produce at commutation prices must amount to 4s. per acre.

Now take 100 acres of land which is really good, and on this will be annually produced

25 acres of wheat at 4 qrs. per	£	s.	d.
acre, or rather more, 4 ² at			
56s. 3d. = £12 . . .	300	0	0
50 acres in barley and oats—			
6 qrs. barley at 33s. 9d., or			
8 „ oats at 22s. = £10 . . .	500	0	0
12½ acres of clover, which will be			
mown once and fed once, £6	75	0	0
12½ acres of turnips, fed on the land, £2	25	0	0
	£900	0	0

or £9 per acre without straw. The tithe here, without straw, would be 18s. per acre, and deducting 10 per cent. from this to meet the tithe-owner's costs of collection—he having the straw for nothing—it is shown that the money value of the tenth of the produce of such lands exceeds 16s. per acre.

Few parishes of such land can be found; but I know of several, the landowners of which admitted such crops as the above, and agreed to such a rent-charge.

Very large quantities of land in England, the rent value of which ranges, tithe free, from 35s. to 40s. per acre, are fixed with rent-charges running from 3s. to 6s. per acre, some being arable and some meadow lands. The arable land would produce on an average in corn, taking one-fourth wheat, and one-fourth barley or oats, £4 per acre per annum

at least, showing, after deducting 10 per cent. for collection, 7s. per acre tithe. The grass land, if fed the whole year round, would keep for the winter six months $1\frac{1}{2}$ sheep per acre, and the summer six months $5\frac{1}{2}$, making an average of $3\frac{1}{2}$, and the value of their feed, or what the acre would produce net per annum, could not be put at less than £1 per sheep, showing £3 10s. per annum, or 7s. as the value of the tenth of its produce.

Though commutation has released surveyors from the task of making such calculations, the consideration of all that bears on the produce of land is necessary when rents have to be fixed.

Notwithstanding my figures show the value of the tenth of the produce of land, and that such value does not correspond with the rent-charge, as fixed permanently; yet the commutation of tithes has materially benefited England and Wales. Permanent improvements, such as drainage, removal of fences, and enclosure of waste lands, have been extensively carried out. Capital has been largely expended, and farming has been carried on with an energy before unknown. Land has been cultivated in the way best suited for developing its resources, the fear that by so doing, it might become liable to increased burdens, in the way of tithe, having been removed.

The Act for the commutation of tithes has been a great and healing measure, and has been carried out on the whole with great fairness. Much fewer difficulties have arisen than were anticipated, and although the Act has conferred a measure advantageous both on tithe-owner, land-owner, and tithe payer, and has contributed greatly to the encouragement and improvement of agriculture, yet I think there are some matters of detail which might still be improved.

It should be remembered that the Act of 1836 was

obtained after years of struggling between those who rightly wished to have the full benefit of farming their land artificially, and those persons who were and had been entitled for centuries to a tenth of all that the land produced when it came into a tithable form, and that it was always asserted, when the Act did pass, bickerings between pastor and flock would cease, and, on this ground, and with this hope, many Members of Parliament voted for the measure. It is quite clear that this expected great advantage has not been entirely realized, notwithstanding the fact that the Legislature fixed the rent-charge on the land; because the landowners have almost universally let their land, leaving the tenants to pay this charge. This arrangement is always reluctantly carried out by the tenant, and he pays the rent-charge to the tithe-owner with much grumbling, as if it were something in addition to his rent, forgetting that in fact he is not paying tithe at all, but only so much additional rent, and that if he did not pay the rent-charge, or the land were free from tithe, the landowner would be entitled to a greater rent, to the extent of the rent-charge. The farmer should have no money payments to make to his rector or vicar, but should pay one sum to his landlord, and let him pay his tithe rent-charge, as he would his land tax, by his agent's cheque. This done, the farmer and his parish priest would have no money dealings under the word "tithe," which would be a sound and lasting privilege to both. The landowner being now liable for two years' arrear of rent-charge, if his tenant does not pay it as he has agreed to do, would be thoroughly relieved from the chance of taking his rent from one who had agreed to pay the tithe, and of having afterwards to pay the tithe himself. Rents and tithe rent-charges as a rule, become due at the same time of year. Should the landowner collect his rents one, two, or three months after they are

due, the tithe-owner would gladly wait the same time for his rent-charge, feeling sure, when the landowner's rent day came, he would then receive all his tithes. Every owner would let his land, which was worth 20s. per acre, subject to 3s. tithe, more readily at 23s., tithe free, than at 20s., subject to tithe, and would not sustain any loss by such a proceeding. The costs of collection would also be saved to the tithe-owner,—a boon which, at any rate, should be granted to the resident incumbent of every benefice, and has been adopted in the Tithe Acts relating to Ireland.

The rent-charges were turned into corn rents in preference to allotting land to the tithe-owner, in lieu of his tithes, which was much discussed anterior to 1835, and, after thirty-four years' experience, it is found that the averages have altered the fixed payments in only a fractional degree. I, therefore, hope to see the day when the fixed rent-charges shall be made permanent and unfluctuating money charges.

The whole of the tithes in England and Wales being now commuted for a rent-charge, or provided for by allotments under the Inclosure Acts, it might be supposed that the tithe question had no further practical interest for surveyors beyond entering into their calculations for valuing land, but such is not the case, and a short summary of what remains to be done and of the machinery provided by different Acts of Parliament for carrying out the work may be of some value to young surveyors in their management of estates.

The Tithe Commission, as previously stated, is now combined or amalgamated with the Inclosure and Copyhold Commissions; and the experience of thirty-four years has enabled the office to adopt plans and modes of great practical utility in dealing with matters relating to tithe rent-charges.

It must occur to every one who is connected with landed

property—that where an estate comes to be divided for the purposes of sale, or if a railway is made across the estate, or if part of the estate is laid out for building purposes, or if, on improving the land, fields are divided or several are thrown together, and fences re-arranged—that it is desirable, if not absolutely necessary, that the tithe rent-charge should be re-apportioned, so as to adjust equitably the tithe rent-charge to the altered circumstances of the estate, and prevent the owner or occupier, for the time being, of part of the original estate remaining, becoming liable to pay a rent-charge for land not belonging to him, or in his occupation.

Such alteration of apportionments adapted to the altered circumstances of the estate can be effected under 5 & 6, Vict. c. 54, s. 14, and 23 & 24 Vict. c. 39, secs. 10 and 39, and under the powers provided by the Tithe Commission Office, and a very simple method of numbering the altered plans connected with such altered apportionments has been adopted, which facilitates the identification of any changes in the subdivisions of the estate.

Again, the Voluntary Redemption Act, 9 & 10 Vict. c. 73, s. 5, enables owners of land charged with rent-charges not exceeding 20s. to redeem such rent-charge for a sum not less than twenty-four times the amount thereof; and the compulsory redemption powers contained in 23 and 24 Vict. c. 93, s. 32 and 39, enables any owner of a portion of a field, by the machinery of the Tithe Commission, and without the consent of the owner of the rent-charge (where the contribution to the rent-charge, if apportioned, would be less than 5s.), to redeem such rent-charge at twenty-five times its value. The machinery adopted for ascertaining the amount to be contributed by each owner towards the redemption of the rent-charge and expenses thereof is very simple; the only defect in the Act being that there is no

provision for recovering the amount due from a defaulting contributor except by distress.

The compulsory power of redeeming a rent-charge is of great value where land is being let for building purposes, and subdivided into small plots, inasmuch as no subdivision of a rent-charge, under an altered apportionment, can be made of less amount than 5s., and it would be obviously unfair to the tithe-owner to oblige him to collect a number of small rent-charges, varying from a few pence to a few shillings each, where the original sum had exceeded 5s.

Thirdly. Facilities are afforded under 5 & 6 Vict. c. 54, s. 5, for the exchange of glebe for other lands, with the consent of the bishop of the diocese and the patron of the living, and this power of exchange (taking into account how often the clergyman's glebe consists of scattered fields instead of a compact farm) is a great advantage both to the clergyman and to the landowner whose estates are intersected by small or outlying portions of the glebe. These exchanges are also carried out at less expense than under the Inclosure Acts, as it is unnecessary to advertise the exchanges or to delay the completion for six months after the last advertisement.

Lastly. The Tithe Acts enable the owner of an estate in fee simple or in fee tail, who is also the absolute owner of the tithes or rent-charge arising from the same estate, by a simple deed, poll, or declaration, under his hand and seal, to merge the tithes in the estate, whereby the estate becomes absolutely tithe free. You will recollect that I pointed out, in the early part of this Paper, that the estate from which the tithe issues and the tithe, though belonging to the same person, are distinct properties. The advantage of merging the tithes to the owner of an estate also possessed of the tithes is very great. It prevents the question

arising (by reason of neglect in proving wills, and settlements, and conveyances, of real estate) whether the tithes passed with the estate; and, on a sale of an estate, the vendor can, if he has merged the tithes, easily avoid the double expense of proving his title to the estate and also his title to the tithes, the anomaly also of collecting his income in the two separate forms of rent and tithe is avoided; but, above all, the landowner, who merges the tithes, considerably increases the fee simple value of his estate, *e. g.*,—

Take 20 acres of land which produces a net rental of 25*s.* per acre, and a tithe rent-charge of 5*s.* per acre, the land comes to be sold with the tithe.

The land would sell at 30 years' purchase,	
say £25 by 30	£750
The tithe rent-charge would sell at 20	
years' purchase, say £5 by 20	100
	£850

But if the rent-charge were merged, and the land let at 30*s.* per acre, it would sell for 30 years' purchase on that rental or for £900, and the gain would be about £50.

It will, therefore, be seen that a considerable amount of employment for surveyors still arises from the intimate relationship which exists between the question of tithes and rights of property in land, and a practical knowledge of the Tithe Acts, and of the mode of procedure in the Tithe Commission Office, is of essential importance to a surveyor. I hope my imperfect sketch of a subject which forms an important part of the history of agriculture and landed property may be of use in assisting young surveyors in arriving at a practical knowledge of so much of the subject

as may be now necessary for the purposes of their profession; and, with that view, I commend these remarks, and particularly the latter ones, to their special attention.

In conclusion I beg to acknowledge the obligations which I am under to Mr. ATKYN and Mr. TAYLOR, of the Tithe Office, for their kind assistance in the preparation of some of the details of my Paper.

I have thought it might be useful to give the several Tables and Schedules, following, as an Appendix to the Paper.

APPENDIX.

FIRST SCHEDULE.



1. TABLE showing the average prices of Wheat, Barley, and Oats per quarter, for the Seven Years next preceding Christmas 1835.

Years.	Wheat.	Barley.	Oats.
	£ s. d.	£ s. d.	£ s. d.
1829	3 6 3	1 12 6	1 2 9
1830	3 4 3	1 12 7	1 4 5
1831	3 6 4	1 18 0	1 5 4
1832	2 18 8	1 13 1	1 0 5
1833	2 12 11	1 9 6	0 18 5
1834	2 6 2	1 9 0	1 0 11
1835	1 19 4	1 9 11	1 2 0

The average of the above Seven Years, on which the Commutation of Tithes is based, is—Wheat 7s. 0 $\frac{1}{4}$ d., Barley 3s. 11 $\frac{1}{2}$ d., Oats 2s. 9d. per bushel.

2. TABLE showing the average prices of Wheat, Barley, and Oats, per bushel, during each single year, since 1835, together with the value of a Tithe Rent-Charge of £100, calculated at such prices.

Years.	Average Prices per Bushel (during each single year) of						Value of a Tithe Rent-Charge of £100,calculated at such prices.
	Wheat.		Barley.		Oats.		
	£	s. d.	£	s. d.	£	s. d.	£ s. d.
1835	0	4 10½	0	3 8¾	0	2 9	87 17 7½
1836	0	6 0¾	0	4 1¼	0	2 10½	98 3 10
1837	0	6 11¾	0	3 9½	0	2 10½	99 18 3
1838	0	8 1	0	3 11	0	2 9½	105 3 11¼
1839	0	8 10	0	4 11½	0	3 2¾	122 13 1¾
1840	0	8 3½	0	4 6½	0	3 2½	116 10 0
1841	0	8 0½	0	4 1¼	0	2 9½	106 11 6½
1842	0	7 1¼	0	3 5¼	0	2 4¾	91 18 3
1843	0	6 3	0	3 8¼	0	2 3½	88 10 0½
1844	0	6 4¾	0	4 2½	0	2 6¾	96 17 3½
1845	0	6 4¼	0	3 11½	0	2 9¾	97 11 10
1846	0	6 10	0	4 1	0	2 11½	102 13 8¾
1847	0	8 8½	0	5 6½	0	3 7	131 5 4½
1848	0	6 3¾	0	3 11½	0	2 6¾	94 7 3¼
1849	0	5 6¼	0	3 5½	0	2 2¼	81 16 11½
1850	0	5 0¼	0	2 11	0	2 0½	73 2 11
1851	0	4 9¾	0	3 1	0	2 3¾	76 16 10½
1852	0	5 1	0	3 6¾	0	2 4½	82 18 5¼
1853	0	6 7½	0	4 1½	0	2 7½	97 13 1¾
1854	0	9 0½	0	4 6	0	3 5¼	122 19 10½
1855	0	9 4	0	4 4	0	3 5	122 4 4¼
1856	0	8 7¾	0	5 1½	0	3 1¾	122 6 8¾
1857	0	7 0½	0	5 3	0	3 1½	115 10 5
1858	0	5 6¼	0	4 4	0	3 0¾	99 16 5¾
1859	0	5 5½	0	4 2¼	0	2 10¾	96 5 6¾
1860	0	6 7¾	0	4 6¾	0	3 0½	106 16 10
1861	0	6 11	0	4 6	0	2 11½	106 11 10
1862	0	6 11	0	4 4½	0	2 9¾	103 15 5
1863	0	5 7	0	4 2¾	0	2 7¾	94 3 10¼
1864	0	5 0¼	0	3 8¾	0	2 6	85 10 10½
1865	0	5 2¾	0	3 8½	0	2 8¾	89 2 8½
1866	0	6 2¾	0	4 8	0	3 0¾	105 19 10½
1867	0	8 0½	0	5 0	0	3 3	119 13 7
1868	0	7 11½	0	5 4½	0	3 6	125 9 5
1869	0	6 0¼	0	4 11	0	3 3	109 7 7¾
1870	0	5 10¼	0	4 3¾	0	2 10½	98 14 1¼

Average annual value of Tithe Rent-Charges during the whole of the above 36 years, £102 2s. 9 $\frac{1}{4}$ d.

3. TABLE showing the actual value of Tithe Rent-Charges in each year, since the passing of the Tithe Commutation Act, together with the average prices of Wheat, Barley, and Oats, during the preceding Seven Years, on which such Rent-charges are based.

Years.	Average Prices per Bushel (during seven preceding years) of									Value of a Tithe Rent-Charge of £100 calculated at such prices.		
	Wheat.			Barley.			Oats.					
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1837	0	6	8½	0	3	11¾	0	2	9	98	13	10
1838	0	6	6¾	0	3	11¼	0	2	8¾	97	7	11
1839	0	6	6½	0	3	9¾	0	2	8	97	7	9
1840	0	6	9	0	3	11¼	0	2	9½	98	15	9½
1841	0	6	11¾	0	4	1	0	2	10¾	102	12	5½
1842	0	7	3¾	0	4	2	0	2	11¼	105	8	2¾
1843	0	7	7½	0	4	1½	0	2	10½	105	12	2¾
1844	0	7	7½	0	4	0½	0	2	9½	104	3	5¼
1845	0	7	7	0	4	1½	0	2	9	103	17	11½
1846	0	7	4	0	4	1½	0	2	9	102	17	8¾
1847	0	7	0½	0	4	0	0	2	8½	99	18	10½
1848	0	7	1½	0	4	1½	0	2	9½	102	1	0¼
1849	0	6	10½	0	4	1½	0	2	8¾	100	3	8
1850	0	6	7½	0	4	1½	0	2	8½	98	16	10½
1851	0	6	5½	0	4	0	0	2	8	96	11	5
1852	0	6	2¾	0	3	10½	0	2	7½	93	16	11¾
1853	0	6	0½	0	3	9½	0	2	6¾	91	13	5¾
1854	0	6	0	0	3	9½	0	2	6¼	90	19	5½
1855	0	6	0¾	0	3	7¾	0	2	6	89	15	9
1856	0	6	6	0	3	8½	0	2	7½	93	18	1½
1857	0	6	11¼	0	3	11¼	0	2	9¼	99	13	7½
1858	0	7	2¾	0	4	3½	0	2	11	105	16	3¾
1859	0	7	4	0	4	5½	0	3	0½	108	19	6½
1860	0	7	4½	0	4	6½	0	3	1¼	110	17	8¾
1861	0	7	4½	0	4	7½	0	3	2	112	3	4¾
1862	0	7	0¾	0	4	7¼	0	3	1	109	13	6¼
1863	0	6	8¾	0	4	7½	0	3	0	107	5	2¼
1864	0	6	3½	0	4	5¾	0	2	11¼	103	3	11
1865	0	6	0	0	4	3¼	0	2	10	98	15	10¾
1866	0	5	11½	0	4	2¼	0	2	9½	97	7	9½
1867	0	6	0¾	0	4	3	0	2	9¾	98	13	3¼
1868	0	6	3½	0	4	3¾	0	2	10½	100	13	8
1869	0	6	5½	0	4	5¼	0	2	11	103	5	8½
1870	0	6	3½	0	4	6¼	0	2	11¼	104	1	0½
1871	0	6	4	0	4	6¼	0	3	0¼	104	15	1¼

Average annual value of a Tithe Rent-Charge of £100 during the above 35 years, £101 1s. 8d.

SECOND SCHEDULE.



The following are a List of the Acts of Parliament relating to Tithes:—

PRESCRIPTION.

1832. 2 & 3 *William IV.*, c. 100.

An Act for shortening the time required in claims of *Modus decimandi*, or exemption from or discharge of Tithes.

1834. 4 & 5 *William IV.*, c. 83.

An Act to amend the above Act.

THE COMMUTATION OF TITHES.

1836. 6 & 7 *William IV.*, c. 71.

An Act for the commutation of Tithes in England and Wales.

NOTE.—This is the principal Act.

1837. 7 *William IV.*, and 1 *Victoria.*, c. 69.

An Act to amend the above Act.

NOTE.—Contains provisions enabling parish boundaries to be defined and settled.

1838. 1 & 2 *Victoria*, c. 64.

An Act to facilitate the merger of Tithes in land.

1839. 2 & 3 *Victoria*, c. 62.

An Act to amend and explain the preceding Acts.

NOTE.—Enables special apportionments to be made, and contains provisions as to the valuation of Tithes merged in

copyhold land, and as to Rent-Charges upon newly-cultivated fruits, plantations, and also upon hop gardens.

Further provision is also made in this Act for the settlement of disputes as to boundaries.

1840. 3 & 4 *Victoria*, c. 15.

An Act to explain and amend some of the provisions of the preceding Acts.

1842. 5 & 6 *Victoria*, c. 54.

An Act to amend the preceding Acts, and to continue the officers for a limited time.

1846. 9 & 10 *Victoria*, c. 73.

An Act to further amend the preceding Acts.

NOTE.—Enables separate Rent-Charges, not amounting in the whole to more than 20s., with which the lands of any owner shall be charged, to be redeemed on payment of a sum not less than twenty-four times the amount of the Rent-Charge.

1847. 10 & 11 *Victoria*, c. 104.

An Act to explain the preceding Acts, and to continue the officers appointed under such Acts.

1860. 23 & 24 *Victoria*, c. 93.

An Act to amend and further extend the preceding Acts.

NOTE.—There are some very important provisions in this Act; as to the conversion of Corn Rents, under Local Acts, into Tithe Rent-Charges; expenses of recovering Rent-Charges and compulsory redemption of Rent-Charges.

CONSOLIDATION OF COMMISSIONS.

1851. 14 & 15 *Victoria*, c. 53.

An Act to consolidate and continue the Copyhold and Inclosure Commissions, and to provide for the com-

pletion of proceedings under the Tithe Commutation Acts.

1862. 25 & 26 *Victoria, c. 73.*

An Act for continuing the Copyhold Inclosure and Tithe Commissions, and entitling the Commissioners to superannuation allowances.

1867. 30 & 31 *Victoria, c. 143*, continues the Copyhold Inclosure and Tithe Commission until the 1st of August, 1872, and the end of the then next session of Parliament.

Mr. R. C. DRIVER (Member) said he had great pleasure in moving a vote of thanks to Mr. STURGE and Mr. OAKLEY, for their excellent Papers. Mr. STURGE had dealt more with the moral side of the question, while Mr. OAKLEY had confined himself more strictly to the commercial point of view. He would remind Mr. STURGE, in passing, that tithes were of earlier institution than the time of Moses. It would be found, on reference to the Scriptural account of Joseph (Genesis xlvii. 22-26), that during the famine in Egypt a certain portion of the land allotted to the priests for their maintenance was left in their possession when the rest of the country was purchased by Pharoah of its owners. Moses was the exponent, not the originator of the law of tithes; for Abraham (Genesis xiv. 20) gave to Melchizedek tithes of all. Then, again, his grandson Jacob (see Genesis xxviii. 22) gave the tenth to the Lord for the maintenance of worship and other pious uses. Mr. STURGE had cleared up the subject to the period when Mr. OAKLEY took it up. His own experience as a surveyor did not go back beyond 1835; but he would remark, with reference to the subject before them, that land, in localities with which he was well acquainted, had been improving in value from that year to the present

day. Whether that was the case before 1835 he could not say. The farmer, before the Tithe Act was passed, used not to grub up his coppice land, because, had he done so, it would have had to pay tithe. Neither would he convert pasture land to arable, in some districts where such a course would be an improvement, for the same reason; but as soon as the Act of 1835 was passed those lands were brought into cultivation and drained. It might safely be said, therefore, that the era of improvement and better farming commenced with the passing of the Act, which he thought might fairly be said to have been a wise and excellent measure. He had some reminiscences of the taking the tithes in kind, and recollected that on one occasion the farmers, owing to some dispute, determined to set out their tithes in kind, and he had to see, day by day, the tenth pail of milk, morning and evening, placed on one side; also the tenth cock of hay set apart; in fact, the tenth part of all the produce; the clergyman was obliged to have a staff of milk-bearers, &c., and to become a dealer, and send all the produce to the market; and, in fact, had a barn and homestead for these purposes. The result was, that in that parish the tithe, which was supposed to be worth something like £1,200 a year, did not secure to the clergyman more than £200, —only about the sixth of its value. He thought that the tithe-owner—more especially the rectorial tithe-owner—had very greatly benefited by the Act; a fact clearly enough set forth in the Papers read. Before it was passed, tithes were a property of so ill-defined a character as to be almost unsaleable; but now their value was as distinct and ascertainable as that of any other kind of property.

Mr. JOHN CLUTTON (Past-President), in seconding the vote of thanks, observed with reference to the difference in the classes of maps to which Mr. OAKLEY had alluded, that

during the first year of the passing of the Act all the maps were, he thought, first-class ones. If he rightly remembered, it was on the motion of Lord HILTON (then Sir WILLIAM JOLLIFFE), that it was declared to be unnecessary to have maps of so expensive a kind. It was greatly to be regretted, however, that the high character of the maps was not maintained.

Mr. E. J. SMITH (Member) said that the improvement of agriculture did not begin in 1836; for any surveyor, who had an opportunity of testing the fact, would find that the incomes from tithe or land increased from three to four times in amount from 1735 to 1835, and he hoped that in the next hundred years it might be the happy fate of the Members of the Institution to find the increase in landed income equally great. The effect of the Tithe Commutation Act undoubtedly was to fix the sum raised from the tithe on the scale at which it must continue for ever; and if the future effect were tested by the effect which would have been produced had that Act been passed a hundred years earlier, it would be found that the results would have been most disastrous to the owner. He would state a case which exhibited the change which had occurred since the year 1650:—

The rectorial tithe of the parish of Kilham, comprising 6,885 acres in Kilham Liberty, and 775 acres in Swagthorpe Liberty, was, in the year 1650, of the annual value of £254 5s.

Two hundred years afterwards the rectorial tithe of the 775 acres in Swagthorpe Liberty alone was commuted, under the Tithe Act of 1836, for a rent-charge of £256 7s. 6d. yearly.

In the meanwhile, in the year 1771, the rectorial tithe of the 6,885 acres in Kilham Liberty, was, under an Inclosure Act, agreed to be of the value of £410 a year; and one

half was set out as a rent-charge of £205 a year, and the other half was set out in land, producing a rent of £205 a year.

One hundred years had passed, and now, in 1871, the rent-charge of £205 continued to be paid, but the rent of the land had continuously improved, until it now exceeded £1,000 a year. The owner had never expended a penny upon it, but lessees had made large profits in the course of its improvement. The parish was purely agricultural in every respect.

The PRESIDENT was sure the Members were very much indebted to the authors for the Papers which had been read that evening. He could carry his memory back to a period long before the time of the passing of the Act to which the readers of the Papers alluded. He himself had had experience of the collection of tithes in kind. He knew the difficulty of dealing with the land in consequence of that charge, and the effect of it on land where improvements were going on. Every landowner was naturally disinclined to improve his land, because he knew that a large portion of the benefit arising from his so doing went in tithes. He believed that the arrangement made by the Act of 1836 was a most excellent one for both tithe-owner and landowner, and the way in which it had settled down and been carried out, must, he thought, satisfy every one that it was based on a fair arrangement, equitable to both parties. He thought the plan of regulating its value by the average price of corn an excellent one, because it would be seen that the average had varied so little that one might almost take, in making a valuation, the amount at which the rent-charge had been fixed as the basis for calculation.

The vote of thanks having been put, and carried unanimously, the Meeting adjourned.

THE PROGRESS IN UTILIZATION OF SEWAGE,

AS SHOWN BY THE EXPERIENCE GAINED UPON
THE LODGE FARM, BARKING.

By HENRY JOHN MORGAN.

*Read at the Ordinary General Meeting of the INSTITUTION OF SURVEYORS,
March 27th, 1871.*

THE PRESIDENT IN THE CHAIR.

THE utilization of sewage being a matter of so much importance to the country generally, it becomes the duty of those who have any experience of it, to afford information which may serve to extend its adoption, and I therefore willingly embrace the opportunity of reporting the progress made upon the Metropolis Sewage Company's Farm near Barking, where for the last five years I have had the advantage of an uninterrupted study of the irrigation system; but before entering into the details of the experiments which were in the first instance conducted by Mr. J. C. MORTON and subsequently by the Honorable HENRY PETRE, my predecessors in its management, I would briefly put before you the objects for which the Lodge Farm was taken.

When the Company offered the public an interest in their scheme, there was no positive proof of the intrinsic value of town sewage, because there was little or no practical knowledge of its capability.

The theoretic opinions of chemists and others, together with the large yields of grass which resulted from the

getting rid of large quantities of the Edinburgh sewage, although sufficing to procure a concession from the Metropolitan Board of Works, failed to satisfy the public from whom subscription was sought, and it therefore became necessary to establish a system of experiments to develop the powers of town sewage, and to bring conviction to all classes.

These experiments were commenced upon a farm in a most impoverished state, much of it being of very poor soil, situate in the neighbourhood of others worked by wealthy men who never spare expense, manure, or labour, to secure the heaviest crops; but with whom we have successfully competed. Nevertheless, strange as it may appear, notwithstanding the large crops which have been raised under the very noses of our immediate neighbours, to whom a limited supply of sewage was offered, they continue to tread in their old footsteps as if, seemingly, ignorant of the greater fruitfulness of a farm inferior by nature to their own, but rendered more highly productive by the application of sewage.

The Company at the offset was successful in securing the co-operation of Mr. J. C. MORTON, in whose hands the management of the farm was placed; and as Italian rye grass was then believed to be the crop to which sewage was best adapted, that gentleman caused the land to be laid out for its growth in large quantities, and for its consumption by a large herd of cows.

Circumstances have dictated deviations from the original plan, and Italian rye grass has given way to other crops, experiments in the cultivation of which Mr. MORTON commenced and Mr. PETRE extended, and land at first destined to be worked with farm-yard manure, in contrast to neighbouring sewaged plots, has been gradually placed under irrigation.

The alterations and extensions which have necessarily accompanied our farming operations, instead of having preceded them, have caused them to be much more expensive and less complete than if the whole work had been the result of an original conception, and I now advert to them, because, independently of the interruption they offer to the full working of the farm, the amount of capital expended has been increased much beyond that which would suffice for a similar sewage farm, better organized.

The results which we have from time to time obtained have been laid before you, and the power of sewage to raise all descriptions of crops in abundance has been proved ; but the price which farmers will be able to afford will vary so much according to circumstances and locality as to become a matter of bargain, necessarily regulated by the facilities which the authorities give to the Company, and by the extent of the demand.

I now proceed to the general questions affecting sewage farming, and, firstly, as to the laying out of the land.

The beds which Mr. MORTON caused to be made, and the roads which he placed at right angles to them, were, as I have already stated, for the growth and removal of large quantities of grass, and therefore, although at somewhat greater cost, he made the beds large.

Provided that the consumption of grass is sufficiently rapid to allow the beds to be cleared and sewaged without delay, large beds have many advantages in my opinion over small beds. Circumstances may make it convenient, as it has with us in many instances, to throw up small beds, but it would be incorrect to attribute to the large beds a greater proportionate expenditure of sewage. A few facts will make this clear.

The largest beds on the farm are 50 yards over all, with a fall of 1 in 69 in 25 yards on either side of the supply

carrier, the fall in which is about 1 in 500. The small beds vary in size, some are 12 yards over all, others 16 yards over all. They have an average fall from ridge to furrow of 1 in 30, whilst the greatest fall in the supply carriers varies from 1 in 110 to 1 in 617.

I have carefully taken out the average quantity of sewage used in dressing an acre of grass on the small beds, and I find that it reached, last year, 590 tons; whilst on the large beds, also in grass, it did not exceed 500 tons. I have also taken out the quantity required to dress onions growing in the large beds, and it also contrasts favourably with the above quantity applied to the small beds in grass, although their surfaces were protected from scouring, which the onion beds were not. Mr. MORTON, irrigating grass in full vigour on large beds, consumed 5,000 tons of sewage an acre. Mr. PETRE followed on the same ground; but with a failing crop he reduced the consumption of sewage to 3,600 tons an acre. If, during the last exceptionally dry summer, I have been obliged to apply more sewage to the new grass, which was cut through the season, and grown principally upon small beds, I have not exceeded, over the whole of the grass in its various stages of growth, Mr. MORTON's average.

The cost of labour to apply the sewage to the large beds is also less than to the small, being about $\cdot 0128$, or about one-eightieth of a penny per ton, in the case of the former, to $\cdot 0147$, or about one-seventieth, in that of the latter.

Experience, therefore, shows that (beside the expense of making and maintaining extra gutters) less sewage, less trouble, and less cost is needed in dressing large beds, and confirms what I stated in the pamphlet on this subject which I published in August of 1869. Should necessity seem to require it, there is no difficulty in cutting one or more small gutters upon the "panes" of the large beds when grass crops have given way to small seed, or of striking it

up as we have sometimes done to allow the sewage to trickle down between each row of plants. This will not interfere with the restitution of the bed to its original form when the ploughing follows the removal of the crop; but, in the case of small beds, the fall from the ridge to the furrow is ever varying. While upon this question, I would draw attention to the distribution of water over land having a tolerably sharp fall, and which is generally laid out on the catchwater plan, because some differences of opinion on this subject resulted in an article in the *Agricultural Gazette*, on the 19th of last November, to which I cannot do better than refer you, and with which I entirely agree. The mode usually adopted, as being the best and most economical, is that of cutting gutters on the contour of the hill side, at such distances apart as may be deemed best, having reference to the nature of the ground and the crop.

These gutters may be separately supplied with fresh sewage for the irrigation of the beds immediately below them, or the whole slope may be irrigated by the highest carrier, the water being caught and re-distributed by the lower ones, in succession, as it reaches them.

In both cases the word catchwater is proper; for as the carriers cut on this principle cannot be equi-distant, the water which has passed over the narrowest part of the bed will run into and continue to feed the carrier below it, whilst the remainder of the bed is receiving its dressing. Any inaccuracy or accident in the upper carrier is corrected by the catchwater gutter below it, by collecting for re-distribution any escaping sewage. The objections to this mode are to the waste of sewage which it causes; but when the gutters are separately supplied with sewage, as each "pane" is dressed, there can be no more waste when adopting this plan than attends any mode of applying sewage by irriga-

tion—and, after all, should waste follow on want of care in laying out, the question will then arise of the comparative value of the commodity wasted, and of the expense in preventing it. As regards the state of the crops at the top and bottom of the hill, in all cases where we have had any experience, we have not seen any difference whatever.

When our farm was laid out, the beds were so arranged that any water which escaped from one set of beds should be caught and conveyed away in carriers for re-distribution over some lower part of the farm, the possibility of a fifth use of the water being afforded, the object being partly to utilize the whole of the sewage put upon the land, and partly to obviate the possibility of the collection and stagnation of sewage at any point. But this precaution proved in practice to be unnecessary; for even when some water escaped for use in the second level, it became so reduced by absorption as to be quite inadequate to a dressing; whilst it induced carelessness on the part of the watermen, and a greater flow of sewage to be put on the beds under irrigation than was due to their dressing.

I, therefore, as I stated in my report, cut off communication between the beds, and limited the sewage to the land to which it was directly applied.

I may here repeat that whether the sewage has been applied to beds in ridge and furrow, on the flat, or by means of catchwater gutters, none has ever passed from the surface of the land into the stream which flows through our farm; but has all been absorbed by the land, or carried away by the subsoil drains.

The cost of laying out a farm to receive sewage is a question always put, but very difficult of reply, since cost must depend on ever-varying conditions of soil, site, &c. It can, therefore, only be met by a guess made under very wide limits. I think, however, that when we include the

cost of levelling hedges, filling-in of ditches, felling trees, and making roads, all of which must be considered in the work of laying out the land, that between £5 and £10 per acre, exclusive of draining, will, over small farms, be found to be necessary.

The would-be sewage farmer, in his forgetfulness that he is about to establish a factory and not a mere farm, and that his profits are to be those of the former instead of the latter, is often daunted at the outlay which he *may* have to make, and it is this feeling which I fear will cause farmers to lay out only small portions of their land at a time, in place of at first entering on a general and satisfactory plan.

The question of subsoil drainage is one of great importance to the sewage farmer; and although Mr. MORTON was induced to believe that the drains which he caused to be put in our light soil were a useless addition to the general expenditure, they have been not only very useful, but scarcely sufficient. The enormous growth of top in our carrots last season without a corresponding growth in the roots themselves, was, I am satisfied, attributable to the continued moist state of the ground in which they grew, and to the hot sun which forced them.

The quantity of sewage we applied was not large, and the land is very porous; but when, on the removal of the crop, and long after sewage had ceased to be applied, we commenced draining it, we found it full of water, mainly from land springs and partly from surface water.

Mr. BAILEY DENTON, in his very exhaustive Paper, lately read at Maidstone, is quite at home upon this point, and, from the authority with which he speaks, his Paper will have been read with satisfaction by all who take an interest in the sewage question, since he

unhesitatingly promises to adapt clay soils to receive large dressings of sewage, and thus removes difficulties which have hitherto been feared by many to exist.

We have applied sewage to good strong land on the Lodge Farm with success, but only lately have we drained some which has undeniable clay within less than 2 feet of the surface. I hope on a future occasion to be able to give favourable results regarding its cultivation under sewage; but with a fair depth of mould to protect it, we shall avoid the cracks which the sun brings to clay, and which have hitherto operated against its suitability for irrigation purposes.

Before quitting this subject I submit, with every deference to his opinion, that Mr. BAILEY DENTON rather underrates the cleansing properties of free soil, when he limits its power of reception to the sewage of 150 persons per acre. Taking his standard of $32\frac{1}{2}$ tons of sewage as the annual contribution of each head of population, and the number of tons of sewage which we last year put upon many acres of grass, without being able to maintain an average growth, it will be seen that the sewage of 335 persons was consumed on one acre of land.

Had our object been *to get rid of sewage*, instead of confining the dressings to the quantity we considered absolutely necessary, I have no doubt that the land would have taken, and have cleansed very much larger quantities than we put upon it.

The mode of conveying sewage about the farm for distribution is a matter which will require the consideration of those entrusted with its laying out, and I only draw attention to the subject in order to point to the objections which exist to the troughs upon wooden stilts, both in wood and iron, which we have in use.

They are both objectionable, from being unsightly and obstructive. The iron troughs are, furthermore, inefficient, owing to their flexibility allowing a change of form, and are expensive to repair, besides being costly. Of the two, the wooden troughs are less expensive and more efficient, cause less trouble, and are more readily constructed and repaired.

Another point to which I would briefly refer is, as to the state in which the sewage should be when applied to the land. Of course all sewage is not alike, and, therefore, in the remarks I make, it must be understood that I speak of that which we take from the main outfall sewer at Barking Creek.

The sewage flows to the pumps in the state in which it travels in the main sewer, a screen being generally used to prevent sticks, &c., from entering and hindering the action of the valves.

The sewage on reaching the farm is at once applied to the land without dilution or separation, and, during the five years we have pursued this course, we have never felt the slightest ill effect from it on any of the various crops irrigated.

It will, therefore, follow that it is perfectly unnecessary to embarrass the question of the irrigation of land by North London sewage with any contemplation of the heavy expense which would attend on a dilution of it by pumping Thames or other water for such purpose.

As to the cropping of the ground, I can add but little to what has been already said in the reports of our proceedings; but there can be no difficulty in selecting crops which will repay the producer, since we have tried almost every description of crop and found all equally benefited by sewage.

During the last eighteen months I have endeavoured to

keep most of the land full, and have so arranged the crops as to leave as little land as possible in fallow, in order to see whether this system permits of the proper cultivation of the land for following crops, or whether it is desirable, on the contrary, to adhere to the general plan of fallowing the land. The result was not unpromising; but we are now pursuing the opposite course with a portion of the land, so as to obtain a desirable contrast between the two systems.

I wish, however, to say that I am of opinion that it will be found advantageous, if not absolutely necessary, occasionally to use farm-yard manure jointly in the production of crops, and at times, also, independently altogether of sewage dressings.

I am quite aware that I have been accused of spoiling sewage experiments by manuring land subsequently dressed with sewage, and have been told that the world already knows what dung will do in producing crops, and that what it now wanted was to be instructed in the power of sewage alone.

I readily admit that the world does know what dung will do, but it also knows when the power of dung fails; and it requires to learn from practice what dung and sewage jointly will be able to accomplish over an average of years.

I have no hope that, because a heavy dressing of farm-yard manure will produce 50 tons of mangold per acre, and that liberal dressings of sewage will, on an adjoining piece of land, produce 60 tons of mangold per acre, that the union of the dressings will therefore produce 110 tons per acre, but I do expect material benefit to result from assisting moderately dunged land with sewage dressings, as the seasons may dictate. Had some of the lands in our vicinity, which are so admirably farmed by thoroughly practical men, been treated last season with sewage, my own

experience entitles me to assert that the returns would have been extraordinary.

In other countries, where, as I am informed, irrigation with both sewage and water is practised, this course is adopted with great results, and its introduction here will conveniently extend the area for sewage distribution, by throwing open large tracts of market-garden farms, which will always be well supplied with London dung by means of the returning waggons which have delivered the produce to the markets.

I have hitherto only spoken of dung as an advantage ; but whether a good working in of farm-yard manure will become advisable, if not necessary, in order to break up the land after continued dressings of sewage, is a question remaining for decision. My impression is that if there is to be a rapid succession of satisfactory following crops, this course must be adopted.

Mr. MORTON had, no doubt, good reason for advocating its use when preparing land for crops to be afterwards treated with sewage, and Mr. PETRE has spoken of an occasional difficulty in starting a good plant with sewage alone.

The result of our experience last year, with partial and light dressings of farm-yard manure upon land to be sown with onions, was perfectly satisfactory ; and it is no argument to urge that the great difference which at first existed between the parts both manured and sewaged, and those under sewage alone, finally became scarcely distinguishable ; because the season was one so eminently in favour of sewage ; and there is no opening for a *dictum* as to what might have been the case had the summer been of an ordinary character.

As an instance of the value of adding dressings of sewage to ground previously dressed with farm-yard manure,

I can refer to a portion of the onion-sown land, which had been originally reserved for dung alone, for the purpose of contrasting its produce with the beds otherwise treated. The dressing of dung upon this piece of land was equal to that which our neighbours would have applied. The crop, owing to the drought, threatened to be a failure; but I resisted all efforts to have the sewage put upon it until towards the end of July, when the contrast between the beds was complete.

The sewage was then, at the eleventh hour, applied, and the manner in which the onions responded to the treatment was quite astonishing, and an average crop was ultimately secured.

The reduction in the area of land in grass cultivation made by Mr. PETRE (when Mr. MORTON's appointment to the Rivers' Pollution Commission caused him to relinquish the management of the farm), and the extension of experiments with other crops, was rendered necessary owing to the loss of our cows, and became desirable on account of the greater profit to be obtained by the disposal of market-garden crops in the London markets.

The extension of the sewage to more land was rendered also desirable by reason of the diminution in the quantity of dung at our disposal.

I would only refer, however, to the previous management to show how irregular the returns of the grass and sewage for the years 1867 to 1870 have been, owing partly to the different stages in which it was cut, and partly to the failure of the late sown grass in 1869 and of the spring sown grass of 1870.

The average yield of grass per acre, during Mr. PETRE's first year, was 21.6 tons of grass per acre for 3,650 tons of sewage. In his second year, it was 34 tons per acre for 3,600 tons of sewage, and during the last year, the average

was but 20·4 tons per acre (and I must refer you to my report for some of the reasons of these short returns) for 5,000 tons of sewage. It must be remembered that Mr. MORTON irrigated land freshly sown, and having, therefore, the advantage of grass all in full vigour, he made a return of 44½ tons per acre by the application of 5,000 tons of sewage.

Taking the two plots which I refer to in my report, B No. 1 and H, which were sown in the autumn of 1869 and were sewaged and cut through the season of 1870, we find a return of 36·4 tons of grass per acre for 11,481·2 tons of sewage.

The yield of grass from these two plots approaches that obtained by Mr. MORTON; and the additional quantity of sewage which was required to produce it must be attributed to the exceptionally hot season.

The general results attendant on our cultivation of this plant show that it is less hardy than it was supposed to be, and that it cannot be counted upon for more than one season.

The yield also does not ensure its being as profitable as many other crops, whilst it requires the maximum quantity of sewage.

By an unlimited supply of sewage the Edinburgh meadows yield large crops of strong grass, but the cultivation of Italian rye grass has been in most part abandoned, and, it may be, that the Metropolis Sewage Company are to be congratulated in not having rested their expectations of full returns from the reclamation of the Maplin Sands, and the establishment there of large dairy farms supplied from large tracts of sand in Italian rye grass.

As my report on last year's operations on the Lodge Farm is replete with full details, I cannot do better than refer you to it for general information; but I propose to detain you whilst I refer to such of the returns of crops which, when my report was issued, were incomplete, from

not having been removed from the land and realized, which has now mostly been done, and, in almost all cases, the amounts received by the recent sale of crops have exceeded the valuation affixed to them in the report.

As regards grass, I have already said that B No. 1 and H were the best samples of our last year's grass. Both were well established in the autumn of 1869.

The average yield over both plots amounted to 36·4 tons of grass per acre, produced by the application of 11,481·2 tons of sewage = 259 tons of sewage to one ton of grass.

The general expenses due to the crop amounted to £12 an acre, *plus* the labour of applying sewage, which was £1. 9s. an acre.

The average of the dressings was 500 tons, and the cost of applying each dressing was about 1s. 8d. per acre.

Upon plot A the mangold-wurtzel weighed 50 tons an acre over all; but, upon the portion where a single crop occupied the land, the yield was 62 tons per acre, ascertained by passing the whole crop over the weigh-bridge.

The quantity of sewage was 5,684 tons per acre.

The sugar beet upon this plot yielded 42 tons 15 cwt. an acre, after deducting 10 per cent. for mould adhering to the roots.

The quantity of sewage applied was 1,120 tons an acre, at a cost, for labour, of 10s. 6d. The other labour due to the crop amounting to £9. 14s. 8d.

The price at which it is now sold out of the clamp is 23s. 6d. per ton, equal to £50. 13s. 4d. per acre.

The analysis of the roots tested by Mr. DUNCAN gave a yield of no more than 8·64 per cent. of sugar, being much less than we had previously obtained by the use of sewage; nevertheless, owing to the weight of the beet, that percentage gives a yield of about 3½ tons of sugar per acre.

The collards, again, upon this plot, which were planted towards the end of June, were four months in the ground.

The expenses due to the crop, including marketing, &c., amounted to £21. 13s. 11d.; and the cost of applying 3,500 tons of sewage was 8s. 4d. The gross receipts, *per contra*, amounted to £73 per acre.

I will now also correct my estimate given in the account of plot A, at page 18 of my report, by the following contrast of the estimated figures in the report with the sums actually realized:—

PLOT A, CONTAINING 9A. 2R. 11P.									
Acres.				Valuation.				Realized.	
a. r. p.				£ s. d.				£ s. d.	
Cabbage	9	1	13	...	258	14	3	...	361 11 11
Grass	8	2	17	...	90	0	0	...	90 0 0
Mangold.....	4	3	28	...	118	0	0	...	221 0 0
Sugar Beet.....	0	3	28	...	20	0	0	...	47 6 0
Turnips	0	2	2	...	0	10	0	...	0 0 0
Total acreage.....	24	1	8		£487	4	3		£719 17 11
				Total amount				Total amount	
				of valuation.				received and	
								being realized.	

These items are correct, with the exception of the mangold, which not being all disposed of, I have taken as worth 18s. per ton, though we are now receiving £1 per ton on the farm.

This gross return of say £720, obtained from 9 acres, 2 roods, 11 perches, gives a return of £75. 10s. per acre within fifteen months, the quantity of sewage (= 8,676 tons an acre) having been applied during twelve months.

No doubt this is a very large return, and the prices realized for some of the crops are exceptional, and are entirely due to the drought, and the consequent failure of green crops generally.

The greater part of the onions in plot C was sold, on the ground, for £43 per acre. The labour due to the crop amounted to £10 an acre, and the cost of applying 4,483 tons of sewage was 12s. an acre.

Of the Savoy cabbages in plot E there were nearly 12 acres, of which 5 acres were sold for £40 an acre on the ground.

The cost of labour over the whole crop up to the time when they were sold, or were ready for market, was £5. 5s. per acre; the cost of applying 2,833 tons of sewage was 9s. an acre. The expenses attending the marketing of the 7 acres amounted to £9 per acre. The amount, therefore, to be deducted from the crop sold at £40 is £5. 14s., leaving £34. 6s. per acre, and the amount to be deducted from the crop marketed which produced £42. 12s. 3d. is £14. 14s., which leaves an average over the 7 acres of £27. 19s. 3d.

The parsnips on plot G have proved very successful; part of them were sold on the ground for £50 an acre; 2,192 tons of sewage were applied at a cost of 9s. 3d. per acre.

The return, after deducting labour to crop and marketing, amounts to £43. 6s. 8d. for crop sold, and £40. 6s. 8d. for crop marketed.

I would here remark that none of our crops are grown for exhibition, but are merely farm crops, tolerably uniform throughout; but, nevertheless, I measured some of these roots, which were very large. One was as much as 20 inches in circumference at the head, and 28 inches in length, weighing $4\frac{1}{2}$ lbs. when washed.

There were others of less size and weight, but of much greater length.

With reference to our sewage wheat crop in plot H, I had estimated in my report that when thrashed it would

yield 5 quarters per acre. This was Long Straw wheat, grown from similar seed to that sown in plot I; both crops have been thrashed out and sold. The sewaged plot H produced 5 quarters, 6 bushels, with 3 loads of straw per acre, whilst the unsewaged plot I yielded but 3 quarters, 2 bushels, and $2\frac{1}{2}$ loads of straw per acre.

Both lots were sold together on the 21st November last, in Mark Lane, for 55s. the quarter, being the top price of the day.

The plot H is a poor stony land, which has borne four wheat crops in succession, three of which have been under sewage, whilst the land on I is excellent land, and has been well cultivated with good dressings of farm-yard dung.

The difference in the yield must be attributed chiefly to the exceptional season.

Plot K had autumn and spring-sown Talavera wheat; a part of each was moderately dressed with sewage.

The land upon this plot is very good.

When the wheat was thrashed, the sample was excellent, and the yield was 6.84 quarters per acre with $3\frac{1}{2}$ loads of straw. It was sold on 30th December last, in Mark Lane, at 64s. per quarter, its natural weight being $64\frac{1}{2}$ lbs.

The remaining crop is that described in my report as Taunton Dean, from plot M. It has not been all thrashed, but 40 quarters were sold in Mark Lane, on the 6th February last, for 60s., the weight of the bushel being $62\frac{1}{2}$ lbs.

No sewage was applied to this crop, except on a very small portion, but the wheat followed mangold, cabbage, and potatoes, to all of which sewage had been directly applied.

As it may be interesting to compare the cost of some of the most successful sewage crops with the returns obtained from their sale, I have had a table drawn up, showing the

cost of labour upon each, with the number of tons of sewage, appended.

As I have already said, these returns are exceptionally large, and therefore it would not be safe to base calculations of what price a farmer could usually afford to pay for the sewage, upon the amounts which have been realized by us at a time when drought had deprived the market gardeners, round London, of their crops.

As regards the prospects for the coming year, I may say that the severe winter has not forgotten to leave its mark on the Lodge Farm.

The grass has been a good deal damaged, and that which was sown late in September or early in October, when the preparation of the land was complete, has been nearly all killed, and must be re-sown.

The brocoli has been cut down and nearly all destroyed.

The late planted cabbages have also suffered, and will have to remain in the ground longer than was intended, and an alteration in the following crops becomes necessary.

The oats have suffered more than the wheat, and a bed of tares has been ploughed up for potatoes.

Permit me, in conclusion, to express a hope that if the directors of the Sewage Company were compelled to abandon the idea of spending between two and three millions to enable the institution of sewage farms on the Maplin Sands, they will have deserved well of the public by their persistent endeavours to develop the value of sewage in a national point of view, by establishing its applicability to every description of crop, with the power of competing successfully, in all weathers, with farm-yard manure, and with unquestioned advantage in times of drought.

It is through their endeavours, as well as those of others, that it has been shown that town sewage in nowise affects health injuriously, but that it contains a power of reclaiming

hot, poor soils, to which, nourishing properties, unaccompanied by moisture, would be manure wasted.

The sale of our sewage crops at the highest rates in the London markets is an established fact, and both horse and cowkeepers readily purchase our grass and roots.

Agricultural minds travel slowly, and reluctantly admit that the old courses can be improved upon, closing themselves against even palpable conviction. They are gregarious, and will only travel in numbers, and hence the benefit, which the free use of sewage is capable of conferring, is withheld alike from the farmer and the nation, and will continue to be deferred until such time as the landowners interest themselves in the increase of income which will attend the adoption of sewage irrigation.

LODGE FARM, BARKING, FEBRUARY 1871.

Particulars of Selected Crops (from 112 acres under Sewage) Realized during the Year 1870, and up to the present date.

Plot.	Acres.	Description of crop.	Previous crop.	Length of time occupying ground.	Gross value of produce per acre.	Cost of general labour, seed, &c., per acre.	Cost of putting on Sewage, per acre.	Tons of Sewage, per acre.	Balance for superintendence, general expenses, rent, tithes, taxes, &c., and to pay for Sewage after paying increased rent to landlord.
A	A. R. P. 3 0 30	Collards	After Grass	4 mths.	£ s. d. 73 1 2 21 13 11	£ s. d. 1 2 31 13 11	£ s. d. 0 8 4	3500	£ s. d. 51 18 7
	4 3 28	Mangold	Do. do.	7 do.	44 17 5 12 3 6	0 17 11	0 17 11	5584	31 16 2
B (No. 1) & H	0 3 28	Sugar Beet	{ After Greens After Grass }	7 do.	50 13 4 9 14 8	0 10 6	0 10 6	1836	40 8 2
	10 3 14	Grass	{ After Peas, Mangold, &c Barley, &c }	12 do.	32 12 3 10 14 1	1 10 0	1 10 0	11,337	20 8 2
C	8 2 20	Onions	{ After Turnips, Brocoli, Savoy's }	7½ do.	37 15 4 9 15 3	0 11 11	0 11 11	4483	27 8 2
E	11 3 33	Savoy's	{ Grass, Peas, Cabbage }	7 do.	41 1 6 10 13 2	0 9 0	0 9 0	2800	29 19 4
	6 3 0	Potatoes	Grass	5 do.	21 15 0 14 16 5	0 9 4	0 9 4	2645	6 9 3
F	9 1 9	Turnips	Potatoes	2½ do.	11 10 0 4 8 8	0 4 10	0 4 10	1832	6 16 6
G	3 0 10	Parsnips	{ Mangold, and Cabbage, and Potatoes }	12 do.	57 3 1 15 8 10	0 9 3	0 9 3	2192	41 5 0
H	5 0 34	Wheat	Wheat	10 do.	19 5 8 5 15 3	0 5 9	0 5 9	1211	13 4 8
K	6 2 0	Do.	{ Brocoli, Canary Seed, Red Beet, &c Mangold }	½, 9 do. ½, 6 do.	19 17 5 4 16 7	{ Sewage over ½ an acre only. }			15 0 10
	1 1 0	Strawberries	Mangold	12 do.	85 2 9 38 18 10	0 4 10	0 4 10	1798	45 19 1
N	1 1 0	Onions	Strawberries	8 do.	62 0 0 13 4 2	0 6 10	0 6 10	1798	48 9 0
	4 0 0	French Beans	Cabbage	6 do.	55 11 10 18 18 3	0 4 3	0 4 3	1620	36 9 4
	8 3 7	Cabbage	Potatoes	5 do.	18 12 6 4 10 10	0 4 4	0 4 4	1136	13 17 4
									{ Part sold for £20 per acre on the ground }
									{ Marketed }
									{ Sold for 64s. per quarter, 30th December, 1870 }
									{ Sold for 55s. per quarter on 21st of November, 1870 }
									{ Part sold on ground for £50 an acre }
									{ 6 acres sold for £11 an acre on the ground }
									{ Marketed }
									{ 5 acres sold for £40 an acre on the ground }
									{ The greater part were sold on the ground for £43 per acre }
									{ At the rate of 36.8 tons per acre per annum }
									{ Now being sold on the Farm Sold }
									{ Cleared by end October 1870 }

Mr. E. RYDE (Member), in moving a vote of thanks to Mr. MORGAN for his Paper, said that he did not feel it possible to discuss it without having previously had an opportunity of reading it. The subject was one of great interest and importance to all practical men. In all directions they now encountered sewage farms in one form or another, and heard of endeavours to purchase land for the utilization of sewage by agreement, or of the exercise of compulsory powers for that purpose. It was now becoming a recognized fact that the application of sewage to land favourably situated, and of a suitable quality, was the best and most profitable method of—he would not say utilizing,—but disposing of it, seeing that it was a commodity which must be got rid of, and the difficulty had hitherto been how to do so in the best way. To find some means of disposing of it, and at the same time to utilize it, must be a great public benefit. There were indications that the question was likely to encounter the dangers of misapplication and abuse, which threatened almost every other discovery in this country, by the placing of the management of sewage farms in the hands of men who really did not know or understand how to treat it in a practical manner. He did not agree with the author that the agricultural mind was slow to adopt improvements, and that it was difficult to move it out of the old groove. A great deal of skill and practical scientific knowledge was now devoted to agriculture, and he did not concur with the old notion that a man who was a farmer was generally a man unfit for anything else. They would be indebted to any gentleman who brought the subject before them, and more particularly were they so, in the present case, when the information came in the shape of actual results gained from practical experience of such matters. He (Mr. RYDE) would have been pleased if the table appended to the Paper had

embraced the results of four or five years' operations ; because it was an essential point to know the result in the long run, and whether the land after a certain number of years got sick of the sewage—as he apprehended would be the case—and how long it would be before it became so. It would also have been interesting to know how often it was necessary to change the treatment. As he had said, he was afraid that the subject was in danger of being handled in an unscientific way. He thought that too much was frequently paid for land for sewage purposes, and that in many instances the control of these matters was in the hands of incompetent persons, such as parish authorities, instead of being under the management of thoroughly practical men. He trusted that Mr. MORGAN would favour them, for some years to come, with similar tables of results, to enable them to arrive at the conclusions to which he had referred.

Mr. H. CRAWTER (Member) had great pleasure in seconding the vote of thanks. Some twenty-five years ago he was connected with a Sewage Manure Company, which acquired powers to tap the sewers at the west-end of London, and convey the contents by pipes to Hounslow and other districts where the sewage would be of great advantage. The capital was to be £150,000 in £20 shares. The Company was not fortunate in carrying out its first Act, but obtained an extension of time and carried the sewage as far as Fulham, applying it as liquid manure to the market gardens in that neighbourhood. For some three or four years it was appreciated by the gardeners, and, for the time being, the Company realized about 5 per cent. on the outlay. The operations, however, extended no farther than Fulham, and were ultimately abandoned altogether. He thought it might fairly be urged, therefore, that it was not the agricultural mind, but the “sewage” mind, which moved in the slow manner complained of.

Mr. R. ATTENBOROUGH (Visitor) understood Mr. MORGAN to state that the land on this farm was poor, and that it was necessary to use farm-yard manure in conjunction with sewage, in order to make the land work more kindly.

Mr. MORGAN said that farm-yard manure had not been put on the poorer land, although he recommended that it should be. He considered that it was more necessary to put the farm-yard manure on the stronger land than on the other.

Mr. ATTENBOROUGH said that if it were necessary to use farm-yard manure on the thin porous lands, he did not understand how the sewage could be used on clay lands.

Mr. D. WATNEY (Member) said it seemed to him that the first point to which the mind of the sewage farmers should be directed, was how to convey the sewage as quickly as possible from the neighbourhood of towns and places where it was likely to become a nuisance. If it could be utilized with profit, so much the better. The facts and figures before them were, in his opinion, somewhat liable to mislead, and he would suggest that the results obtained from the whole farm under sewage treatment should be given, to enable Members to draw their own conclusions. In the present experimental condition of sewage farming, every crop was not successful, and the cases they had now before them were those only which turned out most favourably. With regard to the suitability of clay soils, he would remark that Mr. BAILEY DENTON was reported to have stated in evidence, on the Richmond Sewage Enquiry, that clay soils were best adapted for sewage treatment. He (Mr. WATNEY) considered that opinion not borne out by experience, inasmuch as a clay soil was very retentive, whereas it was most desirable to eliminate

all the sewage matters as quickly as possible from the liquid. As to drainage, there was great diversity of opinion. It was found at Croydon that there was a great flow of water with the sewage, which had sometimes found its way into the drains before it was purified ; so that it was still a moot point whether such land ought to be drained or not. It was stated by Mr. MORGAN that wooden conducting pipes were preferable to iron ; but he (Mr. WATNEY) believed that the new earthenware pipes made by Doulton had been found to answer better than pipes of any other description.

With regard to the application of farm-yard manure, he would state that on the Croydon farm the solid manure was separated from the liquid by Latham's Patent Sewage Extractor, and put upon those portions of land which were sick of the liquid sewage, or which from their level could not be irrigated—a plan which was found to be very useful for getting rid of the solid sewage which might otherwise be useless, or a nuisance.

Mr. R. B. GRANTHAM (Associate) could not enter into the merits of the Paper, having only just heard it read, but remarked that, in order to judge of the advantage of drainage through land, it was necessary to know what was the quality of the sewage put upon the land, as well as that of the effluent water ; facts which, as he understood, Mr. MORGAN had taken no steps to ascertain. Very interesting results had been gained by the committee of the British Association in reference to these points, and, on a future occasion, he might have the pleasure of laying them before the Institution. It was very desirable that the cost of the sewage per ton, as pumped up from the main sewer on to the land, should be ascertained. If Mr. MORGAN would give them that information, it would

be a guide to those who were compelled to pump from deep valleys to sewage farms on higher land, the cost of doing so constituting a large proportion of the total expense. He did not think, however, that towns which were compelled to dispose of their sewage in some way or another should look so closely after profit. In order to obtain it, all sorts of extremes were run into by people not practically acquainted with sewage farming, and enormous costs were in this way incurred. The town of Croydon offered a case in point, where the water had simply been run over the surface, whereas, if the draining had been properly done, he could not but think it would have been of use. Draining through clay land had not been extensively carried out. In fact, he believed, there were but few cases of pipe draining on sewage farms. He hoped they would shortly hear of some instances of the kind, inasmuch as he was sure that advantages might be gained by that means in the application of sewage to such soils.

Mr. J. H. LLOYD (Associate of Council) was at a loss to understand why drainage should not be equally efficacious in the case of liquid sewage as with water only, because it was well known that clay land was more benefited by drainage than any other soil.

Mr. WATNEY observed, that with clay land, the natural rain-fall was equally distributed over the whole surface, and the object was to get rid of it as quickly as possible. The sewage, on the contrary, ran in particular carriers, and the land next to the carriers received the whole of the supply which was to irrigate the land to the next carrier; therefore, the part nearest to the carrier had a larger flow of the sewage, which, by percolation, found its way by the shortest cut to the drains, and reached them,

in some cases, as was found by experience, in an impure condition.

Mr. J. H. LLOYD said that the circumstance must be owing to bad farming; the sewage ought to be equally laid upon the whole surface.

Mr. GRANTHAM observed that the most successful plan of drainage he had met with was in a case in which drains were placed 150 feet apart, and at the depth of 5 and 6 feet; under such circumstances, it was found that about one-third only of the liquid put upon the land was carried off by the drains; and the plan had answered very well as far as could be judged from one year's trial. The distance of the drains from each other should, of course, upon clay lands, be regulated by the density of the soil, and be less than upon gravelly and sandy soils.

Mr. W. J. BEADEL (Member) said they were drifting into a discussion which was scarcely so pertinent to sewage farming as to the under-draining of land. He admitted that draining was twin-sister to sewage, but the application of sewage to undrained land, was, in his opinion, useless. The Paper tended to show that the application of sewage to land was yet in its infancy, and Mr. MORGAN's object was to lead people to believe that it was valuable for that purpose. No doubt it was so when applied with the practical knowledge which Mr. MORGAN himself and Mr. HOPE had evinced in their experiments. It seemed to him (Mr. BEADEL) that sewage might be of value under certain circumstances and not under others. In the case of a small town with a small population, there was no difficulty in disposing of the sewage with advantage, and in passing off its impurities, and letting the supernatant

water flow away. With large towns, however, like Liverpool and Birmingham, the difficulty of dealing with the sewage was great; and there was the further difficulty—alluded to by Mr. MORGAN—viz., the slowness of farmers to believe that advantage could arise from the application of sewage, and their unwillingness to take up the question.

The observations of Mr. MORGAN, with regard to farm-yard manure, struck him as being particularly useful, if the application of sewage to land was to be extended; because he was under the impression that, by the application of sewage, farmers would be relieved of the necessity of treading their straw into manure, and that the sewage was the only fertilizer which would be required. He was satisfied, from what Mr. MORGAN said, that there was an immense deal of advantage in applying farm-yard manure for completing the work of the sewage, and rendering the soil more friable than it would otherwise be. Another point also was gained in this way; for if the sewage delivery were extended into districts not reached by the London manure carts, and where the farmers were obliged to tread their straw into manure, it would enable the farmers in those places to grow a larger amount of green produce to keep their cattle on, to tread their straw into manure, and in that way to fertilize their land. He had no doubt, therefore, that the periodical application of farm-yard manure would be of great advantage. With regard to clay soils, he might observe that he hoped to see the day when it would be proved beyond all doubt that the application of sewage to clay land was the most beneficial application that could be made of it. People fancied that because land was clay there was difficulty in draining it, and in getting the water out of it at all. Were the clay even as deep as this room, he maintained that it was the most perfect and most useful of all soils, if worked in the proper way,

and the whole secret of perfectly farming clay land was deep cultivation at the top. If the land were drained 4 feet deep, and loosened by means of a steam cultivator to a depth of 2 feet 6 inches or 3 feet, the drain was brought, practically, within one foot of what was the surface, and the plant had 3 or 4 feet of mould beneath it, which was fertilized by sewage or farm-yard manure. Consequently, whenever there was rain the plant root obtained a large amount of fertilizing power, which year by year descended lower and lower, converting, by these means, a barren clay into the richest possible soil. In this way, land not more than two miles from the Lodge Farm, which was formerly not worth 10s. an acre, was now letting for £3 or £4 an acre, a result achieved simply by the application of farm-yard or rather London manure, which ten or fifteen years ago was considered something to be got rid of, and for which people had to pay to have it carried away from their yards, instead of selling it at a remunerative price as at the present day. Brewers' grains were another commodity once considered mere refuse, but now sought for by every farmer, to enable him to keep a greater number of cattle than he could otherwise. He should have preferred postponing his observations till he had had an opportunity of reading the Paper; but he felt it his duty to respond to the invitation and say what occurred to him at the moment on this important subject.

On the motion of Mr. J. C. CLAYDEN, the discussion was adjourned till the next Meeting.

The Meeting then adjourned.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, April 24th, 1871,

MR. RICHARD HALL, PRESIDENT, IN THE CHAIR,

The adjourned discussion on Mr. H. J. MORGAN'S Paper, on "The Progress in Utilization of Sewage, as shown by the experience gained upon the Lodge Farm, Barking," was resumed by

Mr. J. C. CLAYDEN (Member), who thought that although the Paper contained a great deal of very useful information, it was desirable to know more with regard to the cost of preparing land for sewage irrigation, and of the various appliances necessary for the purpose. The author had given the results of what must be regarded as exceptional crops; but before the subject could be thoroughly investigated, more information with regard to sewage crops was necessary.

Mr. W. HOPE, V.C. (Associate), said he rose with some reluctance, as he found himself under the necessity of criticising the Paper which Mr. MORGAN had taken so much trouble to write, and which he would have preferred to speak of in terms of approval; but he so utterly disagreed with many of the opinions therein expressed, that he must be excused if he seemed to handle some of the author's remarks a little severely. He joined issue in the first place with Mr. MORGAN'S statement, that the directors of the Metropolis Sewage Company had advanced the cause of sewage

utilization. Those were the very gentlemen with whom he (Mr. HOPE) had been fighting for years in the endeavour to induce them to utilize the stuff now running to waste into the Thames, and (as Mr. RAWLINSON could tell them), creating no little nuisance. It was unnecessary to go through all the phases of the long battle he had carried on; it would be sufficient to point to one or two inaccuracies of their secretary, Mr. MORGAN, which he thought that every one present would see almost at a glance. He found, for instance, that the quantities of sewage said to have been used per acre (but which quantities he altogether disputed) were the same, or very nearly so, as were given in an elaborate report from the secretary to the directors, accompanied by tables of great apparent accuracy. He believed that the figures were carried out even to the third place of decimals. But as a matter of fact, there existed no appliances on the Lodge Farm for measuring, even approximately, the quantities of sewage used, and those figures were consequently utterly unreliable. He heard the statement of one of the directors of the Company at a meeting held about a fortnight ago, to the effect that the results of the management of the Lodge Farm showed that the sewage was worth, practically, only a farthing per ton. Now, about the intrinsic value, there was fortunately no room for much difference of opinion; it was as easy to determine as that of any other manure. All artificial manures, guano for instance, especially, were sold upon the vendor's guarantee, certified by some well-known chemist, that they contained a certain per-centage of carbonate of ammonia, superphosphate of lime, &c. In the same way, there was no difficulty in determining, accurately, the *bonâ-fide* intrinsic market value of the ingredients of sewage, whether considered as sewage or as the manurial products of human beings during 365 days: and in an

average of calculations it showed a value of about 8s. per head of a mixed population. Dr. GILBERT, whose estimate was about the lowest, made it 6s. 8d.; while many practical men, including Dr. THUDICHUM, put the figure as high as 10s., 10s. 6d., and 11s. per head of population. Therefore, if the farmer did not derive the full value from the manure he applied, it was probably his own fault. In the case of the Lodge Farm, he could point to figures which, he thought, put the fault upon the farmer, and not upon those distinguished chemists; and this Company was managed in the usual way (*i. e.* by a Board of Directors, sitting in London); and if they were able to obtain so much as a farthing per ton, he considered that practical agriculturists, who had to make their living by their business, would obtain a good deal more. A large portion of the Lodge Farm was laid out, as a water-meadow, by a Wiltshireman who had been in the habit of doing such work, and he laid it out in that manner with the notion that he was dealing with water only, and not with liquid manure, every drop of which it was his duty to utilize. Consequently, he laid out those wide beds which Mr. MORGAN described, and which that gentleman endeavoured to show, were more economical for sewage than narrow beds. Mr. MORGAN said (at pp. 219-20 of his Paper) that the "largest beds on the farm are 50 yards over all," and that the "small beds vary in size, some are 12 yards over all, others 16 yards over all;" and then he stated that he had "carefully taken out the average quantity of sewage used in dressing an acre of grass, on the small beds, and he found it reached, last year, 590 tons; whilst, on the large beds, it did not exceed 500 tons," or about 5 inches of depth. He (Mr. HOPE) did not think it possible, under any circumstances, to get so much as 6 inches of water under ground at one time, unless it was

in a bed of sea-side shingle. Most people knew the effect of an inch of rain in twenty-four *hours*; but this quantity of sewage would be put on in a few *minutes*, and he did not believe that it could be hidden under the ground. He had himself, assisted by several engineers, conducted careful experiments,—an account of which would be found in the recently published report of the Committee of the British Association,—in order to ensure minute accuracy, in three different ways, to check the results against each other. In the first place he used the ordinary notch-board, and maintained as constant a flow of sewage over it as possible. For the second experiment he employed a little arrangement of his own—a sort of sluice or fixed weir in the main channel, with a rectangular opening in the centre. This opening he filled up from the bottom with little strips of wood, so as to maintain a constant head of pressure. He placed a similar weir in the side opening, which allowed the sewage to flow over the land, and in the opening of that weir he placed a piece of sheet iron, with an aperture of known size. By these means, he secured as constant a pressure of liquid flowing through as could be obtained. For the third experiment he used a long box, holding an ascertained quantity of sewage, with sluices at each end, and, opening and shutting these sluices alternately, he could measure the quantity of sewage flowing over the land. These experiments were repeated, both on land stirred on the previous day to a depth of 9 inches and on land which had lain for some months consolidating, and all the experiments corroborated each other. There were such differences only as they might expect in work of that kind. On the 19th of March, when the experiments were made, the land was in a fair average condition, neither very moist nor very dry. He found that, on the consolidated surface, about 40 tons, *not 590 tons*, of liquid were sufficient to dress

an acre of land analogous to grass land from which several crops had been cut, and which was, therefore, in a state of consolidation. Upon the land stirred to the depth of 9 inches, from 90 to 110 tons per acre was a sufficient dressing, on the small bed principle.

The results of a number of experiments, led him to the conclusion that the distance from the central carrier to the furrow should be about 15 feet,—that being the most economical distance for flooding the land without wasting the sewage. Mr. MORGAN, in his Paper, spoke of 25 yards or 75 feet,—just five times as far. It was clear, therefore, that the sewage overflowing the side of the channel, in order to get to the end of the 75 feet, would have to flow over this edge at least five times as long,—the pressure of the water thus acting downwards for five times as long a period. Other things being the same, it must, therefore, descend five times as deep; and the cubical contents of the land saturated under this system must be five times as great as the small quantity saturated on the opposite principle. He failed to see how it was physically possible that this wide bed system could be so economical in distributing sewage as the narrow bed system; and the fact that water found its own level, pointed to the consequence that, in course of time, if the sewage had reached a certain depth at the furrow, it must soak to a point on the same level, but situated at a much greater depth from the surface, beneath the more elevated part of the bed. Then, again, it was easy by one or two ploughings to raise up these narrow beds; but the large beds could not be raised by such means; and, therefore, the laying out of the land in the first instance was more expensive on the wide bed than on the narrow bed system. Then, again, as under the wide bed system it was necessary to dive under the natural surface of the land so deeply, and thus expose and turn into surface land a

quantity of subsoil, it was not to be expected that on that subsoil the same crops could be grown, and on the Lodge Farm this was actually the case: there were patches in the furrows almost bare at times. On the narrow bed system, the subsoil was hardly exposed at all. Mr. MORGAN fancied it took more labour to spread sewage over these narrow beds than over the wide ones. That might be so to some extent,—it was difficult to say whether it was so or not,—but it must not be supposed that a separate man was employed on each of these narrow beds. Each of his own men took four or five of them, and instead of a great stream of sewage scouring down the bed, and washing away the soil in its endeavours to reach the bottom, the liquid oozed over the surface and reached the furrow in two or three minutes. The sewage, in fact, was not flowing over the same square yard of land for more than two or three minutes, and the enormous waste of sewage by perpendicular soakage beyond the roots of the plants, was thus rendered absolutely impossible. If the feeding roots of the plant were examined, the main bulk of the rootlets by which they derived their food would be found to be near the surface. The exact function of the tap root was not known (it probably went in search of mineral ingredients that were only found in the subsoil), but the valuable portions of the sewage were absorbed by the roots near the surface. He did not know whether it was quite expressed in the Paper; but, taken in conjunction with the report to which Mr. MORGAN alluded, it would appear, that whereas Mr. MORTON got about 40 tons of rye grass from 4,000 tons of sewage, or some such proportion, Mr. MORGAN was only able to get 20 or 21 tons by the application of 5,000 tons per acre, and that difference of yield of crop Mr. MORGAN attributed to the short rainfall. No doubt the rainfall was deficient last

year, but it was hardly sufficient to account for so great a difference. He supposed the total deficiency of rainfall did not exceed 6 inches or 600 tons, yet they were asked to believe that 25 per cent. more sewage produced 50 per cent. less grass, owing to the want of the 600 tons of rainfall.

Then, as to the difference between wooden troughs and iron troughs, he (Mr. HOPE) preferred the opinion of the late Mr. BRASSEY, who said that he considered iron troughs to be just the things that were wanted for the distribution of sewage. The wooden troughs were very little, if at all, less expensive in the outset, and shrank and cracked in the sun, and however well and expensively made, those defects could not be guarded against. Properly made iron troughs on the contrary, such as he had on his farm at Romford, would last for thirty or forty years, and no kind of wooden trough could possibly last so long as that. Then there was one important point which Mr. MORGAN touched upon—the advisability of employing farm-yard manure along with the sewage. Now, that it might suit farmers under certain circumstances to apply the two kinds of fertilizers to the same acre of land, he did not suppose would be disputed; but, as Mr. MORGAN put it, he seemed to imply that they could not get the best results without such a mixture; and from that he (Mr. HOPE) altogether dissented, for the best of reasons. When he entered upon his farm at Romford he found the soil very poor, and without a vestige of manure in it. He had never put anything but liquid sewage upon it, and had obtained all kinds of crops certainly as fine as, and he was told by the buyers finer than, those which had been produced on the Lodge Farm; therefore, he submitted, there was no *necessity* to mix the two manures. A dressing of sewage, however, or of water, might be of enormous value to certain crops in certain seasons, and at certain stages of growth.

Then as to the quantity of sewage which Mr. MORGAN stated, at page 224, he was obliged to use. It appeared that he took the standard supply of sewage, per head, per annum, from the figures of Mr. BAILEY DENTON, who put it at $32\frac{1}{2}$ tons as the annual contribution of each head of population. He did not know how Mr. DENTON got at that figure, but 50 tons was the correct figure for London, and, therefore, all Mr. MORGAN's calculations were wrong. Taking the other figure, Mr. MORGAN stated that the sewage of 335 persons was "*consumed*" upon one acre of land, a quantity equal to 10 tons 9 lbs. of the best Peruvian guano, with 16 per cent. of nitrogen; and he asked any gentleman present whether it was possible to "*consume*" 10 tons 9 lbs. of Peruvian guano on one acre of land, in any one year, and to produce only this miserable return? The directors of the Company stated that a farthing per ton was the commercial value that can be looked for for sewage when taken by farmers. He (Mr. HOPE) ventured to say he paid two farthings per ton for sewage, more diluted than the London sewage. There was no dispute about his quantities, because they could not exceed certain maximum figures. He could not determine the delivered number of tons of sewage upon one acre, as he did not yet know within several tons how much he got on the whole farm in any one day. The British Association kept an experienced man on the farm to check the quantities, and there were a great many appliances which did not exist at the Lodge Farm. In spite of that, they could not get to an approximation within 10 tons a day; and to get the same approximation on each acre would require one assistant-engineer, if not two, to watch each waterman, and, as there were four watermen, the cost would be considerable. The results at Briton's Farm were so far incomplete; but it was his intention to follow the example of the *Daily Telegraph*, and submit his accounts to Messrs.

TURQUAND, YOUNGS, & Co., in order that his figures might be beyond dispute; and those figures would show a great deal more than a farthing per ton for the sewage he "*consumed*."

Mr. J. H. LLOYD asked Mr. HOPE whether he could give some further accounts of the results obtained at Briton's Farm.

Mr. HOPE added that he paid what amounted to £5 per acre per annum for sewage, and he had more than he could use, and gave some to his neighbours; but in spite of that he could not hope to "*consume*" all the sewage he received. But so far as he made out, he received something like £25 per acre for that for which he paid £5 per acre.

Mr. R. RAWLINSON, C.B. (Visitor), said that he imagined there was no question at the present day as to the value of sewage-irrigation, but with regard to its application there would be as many modes as there were men and farms. The broad bed system described by Mr. HOPE might not in all cases answer, neither might the narrow bed system be adapted to all circumstances: it might be that the land would not admit of its adoption. The practice of laying out land for irrigation in beds, wide or narrow as the case might be, had been in existence for 20 years; in some cases the liquid was applied by means of light tin pipes, which could be handled by a boy. The portable carrier being connected with the top carrier, the whole bed could be irrigated in a very convenient manner, and the same treatment continued to successive beds, whenever, at any particular stage of growth, the crop required a dressing of strong sewage. He held that the plan of irrigation by

hose and jet, with engine power to produce the jet, thus allowing the sewage to fall upon the land in the shape of rain, was wasteful, because a costly expenditure of power. The sewage could not, he thought, be kept too close to the soil, or passed too soon beneath the surface. Mr. HOPE's farm, as laid out, was a model, well worth a visit from any person interested in the question of sewage farming. It was admirably laid out. He approved of Mr. HOPE's system of overground carriers on account of the irregularity of the ground; and he also agreed with him that iron carriers were better, and, in the long run, cheaper than any form of wooden ones which could be contrived; because, added to the other inconveniences of wooden carriers, there was the liability to rotting. It might be said that iron carriers were liable to rust; but he did not think there was much danger of their doing so, if moderate care were taken to preserve the outside. As regarded the inside of the troughs, there were, in the sewage, certain greasy matters which would prevent rusting. All that was necessary was to coat the outside with some of the cheap dressings for iron.

With regard to the comparative value of sewage, it had been said by chemists that all town sewage, under laboratory tests, gave similar results. Of course it did, as far as regarded the proportions of its ingredients; but the strength of sewage would be in proportion to the number of persons whose excreta passed into the volume of water used in the town and the quantity coming out of the sewers. In some towns there was a large supply of water by the companies expended by the inhabitants; in other towns there was a larger proportion of subsoil-water mixed with the sewage. It was necessary, therefore, to know the volume of water used by the inhabitants, the number of water closets,—for they were the test of its strength,—and the amount of subsoil-water that mixed with the sewage and floated with it

on to the land. It was argued that weak sewage was a nuisance and a difficulty. For what he knew upon this subject he was indebted to information and observation, never having had any practical experience of the working of a sewage farm; but, when an objection was made against diluted sewage, he was bound to state that he had very rarely met with a case of over-dilution. If sewage were a thing to be got rid of, and not utilized, it would be proper to speak of over-dilution; but if it were used for agricultural purposes, even in our wet climate, he had yet to learn that sewage, where water-closets were general, was over-diluted. The water was of great value. It assisted in the carriage of the ingredients of the sewage over the land; and this point must never be forgotten, that, when a person began with sewage farming, and prepared land for sewage cultivation, it must be continued as a sewage farm hereafter, by regular intervals of irrigation and cropping in a proper manner; otherwise, the labour would be lost and the land spoilt.

A plot of land could not be thrown out of sewage cultivation into ordinary grass land without the loss of two, three, or perhaps more years' cultivation. Italian rye grass absorbed the greatest volume of sewage; root-crops did not want the heavy dressings which were given to grass. In fact, if he rightly understood it, there were certain root-crops which farmers must abstain from heavy dressing with sewage, but let the crop take its own course till it came to perfection. On the other hand, they might, when first planted, be in a starving condition, and then a dressing of artificial manure—say 1 or 2 cwt. per acre—might, with the greatest advantage, be mixed with sewage and so be applied to bring them into a healthy and vigorous state, and start them after they had taken root. Sewage farming was therefore no barrier to the employment of artificial manure judiciously applied. There had been, recently, argument upon argument

advanced to show that sewage farming would eventually ruin this country. Some eminent men, whose names were well known, did not scruple to declare that if this system of sewage farming were to be established, the land would be turned into swamps, and produce agues and fevers, and that horrible cause of disease the growth of entozoa, particularly in cattle used for food. If that theory were susceptible of proof, the prospect to be confronted would be a serious one. Granting that tape-worm was produced in the human system, and that the ova thrown out of the joints, after passing from the human body, became attached to vegetables which were eaten by sheep or pigs, hares or rabbits, and produced the hydatid in their system,—the eating of those animals, in an uncooked state, might produce tape-worm in human beings.

How sewage could induce the production of tape-worm, and make that disease more prevalent than at the present time, he failed to perceive; for the fragments of tape-worm, if placed on land in dry manure, were as liable to infect the grass as when floated over it in sewage. With reference to this, all good sewage farmers would find it necessary for their own sakes, if they wanted sound farming, to have depositing tanks, and take out heavy detritus, gritty matters, and flocculent matter from sewage before it passed into the carriers. But even when it passed into the carriers, he imagined such things as the ova of tape-worms, which were very minute—almost microscopical—would become at once entangled on the edge of the first carrier, and be held there. Moreover, cattle were not as a rule turned out on those farms to graze. The grass was only cut when it had grown to a considerable height, so that there was not even the same amount of risk from this source as attended ordinary grazing on land, dressed with top manure. The test of the matter was this. Had it been found that where sewage irrigation had been carried

out to the utmost extent, and where no attempts had been made to prevent the solid and foul particles of the sewage from going upon the grass, which was cut from year to year, and cattle stall-fed upon it, and where the flesh of the cattle had been eaten, and their milk drank for years (he alluded to the town of Edinburgh),—had there been in that town any augmentation of tape-worm cases? Medical men had been examining this question for years past, but had not found any greater prevalence of tape-worm in that part of the kingdom than in other parts. He thought, therefore, that that bugbear fell to the ground.

Then, again, the alleged danger of converting sewage farms into swamps was another bugbear, and a very slight examination would show that such a thing could not take place if ordinary care were used, and if the area of land was duly proportioned to the volume of sewage put upon it. In no period of dressing with sewage should there be more than from 3 to 5 per cent. of the available area under sewage irrigation at one time, and that for not more than one or two days at a time, if indeed so long. The same portion of land, therefore, would only be from fifteen to thirty days under sewage out of the 365; and inasmuch as the best form for the application of sewage was in thin films, it became incorporated with the surface soil in a very short time, and there was no room for the accusation that the land would be converted into a swamp. Such a state of things arising from sewage irrigation could only be a result of the grossest neglect, unless the locality were naturally swampy, in which case it ought to have been drained before the operations began.

Then another accusation—and a very novel one in this country—against sewage farming was that the produce was so great that there would be no means of getting rid of it. That was certainly a singular ob-

jection, but it had been gravely advanced ; and he believed that in some parts where sewage farming had been carried out, some difficulty had been experienced in disposing of the great excess of crops resulting from that system. The difficulty was owing, however, to the want of arrangements for obtaining a market for the extra produce. A great mistake was being made in allowing Italian rye grass to grow to maturity. To produce the best effects, for dairy purposes, it should be cut when the plant reached a height of about 2 feet, and it was found that at that period of its growth the succulent qualities of the grass were best developed. At Worthing, the grass was sold at so much per rod to the dairy keepers, and the taller the grass was, the better they thought they were served. One dairyman, however, complained that his cows gave a diminished quantity of milk, and it was found that they were fed on the overgrown grass. The man was recommended to try the grass again when about half-grown. Acting upon that advice, he obtained the average quantity of milk, and continued to use the grass at that stage of growth. He was able to dispose of all the butter he could produce, and most of it, he believed, was sent to Sydenham.

With regard to market-garden produce, he could speak from personal experience of the excellence and greatly improved quality of vegetables grown by sewage cultivation. This was especially the case with regard to carrots, both as food for horses, and as a table vegetable. Some persons predicted that vegetables so grown would be large, spongy, and unsound ; but the fact was otherwise. Some carrots which he bought this year were sounder than ordinary ones, as well as larger. If that were so, it would be a great thing to produce in the neighbourhood of large towns, ten times the amount of grass before obtained, as well as ten

times the present amount of garden produce. This would be equivalent to making the area of England larger, obtaining, at the same time, products of higher nutritive value than before; and [if the poverty-stricken people of our great towns and villages could get increased supplies of new milk, good butter, and wholesome vegetables, they would be a great deal the better for it. What was the price at which artificially grown grass, tares, and vetches were now selling in bulk at the livery stables in London? He believed it was as much as 3s. per cwt., or £3 per ton. Mr. HOPE would be glad to sell his produce at one-third of that amount. [Mr. HOPE: at 17s. per ton.] But if he (Mr. RAWLINSON) were to buy any tares or vetches in town, he would have to pay 5s. per cwt., or £5 per ton. Now, if the sewage of London, which was polluting the river most abominably—if that million's worth of sewage which was turned into the Thames and worse than wasted—could be put upon land, fitted to receive it; if fresh districts could be brought into cultivation, thus employing ten times the number of labourers on the land, and affording ten times the present amount of produce, of superior quality, and which could be sold at a great reduction upon the present extravagant prices, if such a result could be effected by dealing with the sewage of the metropolis on a grand scale, the man who accomplished it would be one of the greatest benefactors the country had produced. He had had the honor to report upon this subject, and he had ventured to hint that it was the duty of the Government, or Metropolitan Board, to offer a guarantee to persons who embarked money to carry out such a scheme in a proper way. He would say that no Government could give a guarantee for a more deserving or more hopeful enterprise, or one more worthy of national consideration.

LIEUT.-COLONEL G. A. LEACH (Honorary Member)

said that there could be no doubt this was one of the most important questions of the present day, and no body was in a better position than the Institution of Surveyors for obtaining and supplying to the public the information on this question, which was so much needed.

No farmer could institute sewage operations upon his land, after Mr. HOPE's method, without incurring a considerable outlay, and, as yet, there was not sufficient practical experience and information abroad to induce farmers to incur that outlay. Apart from this, there was another important point—the question of health. Discussions as to the greatest result to be obtained from sewage, were at present somewhat premature. No doubt its agricultural value was great; but to get rid of it from the towns, and to utilize it without detriment to health, were the points of primary importance. He had heard it said by those who had visited sewage farms, that there was more or less unpleasant smell about them, a circumstance which led people to think that they might be injurious to health. It was important that those connected with farms of the kind should obtain statistical information, to show not only that the sewage was beneficial to the land, but innocuous to the health of those who resided in the locality. One large town (Birmingham) was at the present moment in special difficulties with respect to the application of its sewage to the land. He was not sure whether an injunction had not been obtained against the authorities for creating a nuisance, injurious to health, in the neighbourhood of their farm.

No doubt, also, those connected with the A, B C process would tell them that the best way of getting sewage on the land was by that process. That system was established in various places—Hastings, among others—and the Company stated that they sold their manure at a good price. It was fair to assume that farmers knew enough of

their business not to buy that manure unless it was profitable to them; and he thought it would be of great value if some of the Members resident in various parts of the country, and who had opportunities of observing the results obtained by the manure produced by the A B C process, would communicate their information to the Institution. He believed it was claimed for that process that it was better to abstract from the sewage its valuable qualities and, thus deprived of the water, carry it in smaller bulk to the land. It was extremely desirable that they should know whether the manure produced by that process was of any practical value. He was aware that it had been reported against by the Rivers' Pollution Commissioners; but, on the other hand, it was said that the manure so produced was being sold and used in large quantities.

Mr. J. H. LLOYD (Associate of Council) thought he could, in some measure, relieve the mind of the gentleman who had just spoken with regard to the hesitation on the part of farmers in adopting any new system, the application of which they did not thoroughly understand, and more particularly when any special outlay was involved in the adoption of it. Recent experience had shown that, in Essex, where the farmers were most interested in the metropolitan sewage, they had, to a great extent, testified their willingness to apply it to their land, and had expressed an earnest desire to have the opportunity of doing so. The impenetrability of the agricultural mind was not, therefore, so complete as was supposed. The farmers were, certainly, awaking to a sense of the fact that sewage was a valuable fertilizer of the soil, and would be glad to receive it, if they could get it conveyed to their farms at a reasonable price. Of course, they did not, as yet, fully understand what the precise value of the sewage would be to them, or accurately estimate its results when applied to their farms, and were somewhat startled at

the notion of making a large outlay to adapt the land for its reception. That seemed to him, however, to be a difficulty which ought not to be very serious; because, if landlords were willing to assist their tenants in this matter, there were ready means at hand for obtaining the capital wherewith to do it, whilst they would derive higher rents, as the result of increased production, to an extent abundantly sufficient to provide for the annual charge. It was clearly to the interest of landlords to do this. Suppose a landlord to be willing to incur the first outlay—he had nothing to do but to go to the Lands' Improvement Company, or any other of the companies which lend money for the improvement of land, and he could readily obtain the necessary sum, the repayment of which being spread over 25 or 30 years, would fall very lightly upon him. The first thing, however, was to agitate and convince the farmers. He visited Briton's Farm last year, when a considerable number of large and influential farmers were present. One gentleman told him he was the "highest farmer" in the county; that he spared no expense for artificial manures, and no amount in the quantity of dressings; and looking at Mr. HOPE's crops in the first year,—experimental and tentative as they were, and the sewage having been applied at a late period,—he expressed his conviction that Mr. HOPE would secure 20 per cent. more produce than he could obtain with the best and most costly manure he could put upon his land. This opinion was echoed by others, all being equally astonished at the results they witnessed. Even in such an instance as Croydon, the results proved that much better crops were obtained from the application of sewage than from any other fertilizer yet known. There might be, and perhaps there were, auxiliary methods from which good results could be obtained—such, for instance, as the application of consolidated fecal matter to land not adapted for irrigation. For large towns, however, where a considerable quantity

of sewage must be carried off, irrigation was, unquestionably, the best method of application. He was sure it would repay any one to visit either Mr. HOPE's farm at Romford, or the Lodge Farm of the Metropolis Sewage Company. It was well to see both; and he (Mr. LLOYD) was certain the opinion would be come to that very wonderful results had been obtained in each case. He agreed with Mr. RAWLINSON that the first object was to get rid of a nuisance and a difficulty. In adopting the water closet system, and abolishing cesspools, sufficient account was not taken as to how the sewage thus created was to be disposed of. Every day, towns were being called upon to put themselves in order. Mr. BRUCE was besieged with applications from boards of health, and the problem must, sooner or later, be carried to a practical solution. He was convinced that the notion that remunerative returns could not be obtained from the sewage of large towns was a delusion. In Glasgow, £5 per acre was being paid for sewage. A farmer might say he did not want to take sewage in any specified quantity, because he might require it at one time, and not at another; but if an agreement were made with him to pay for the sewage at so much per acre of his land, he would take the quantity which suited his requirements. To the extent of whatever quantity in the aggregate might be thus taken the existing nuisance would be abated; and if they could utilize half the sewage of London, it would be better to pour the other half into the river than to empty the whole of it there. There was no reason to doubt that this scheme of utilizing sewage by irrigation was a most important one, and the best, if not the only one, hitherto proposed for accomplishing the two-fold object of keeping the streams unpolluted and fertilizing the land. The best mode of accomplishing it was a matter for the consideration of the engineer, the surveyor, and the farmer; the engineer to

conduct the sewage to the land, the surveyor to plan out the land for its reception, and the farmer under competent advice to distribute and apply it. The experience of Mr. HOPE and Mr. MORGAN in this matter was most valuable, and they were much indebted to the latter gentleman for the Paper now before them. They were also indebted to Mr. HOPE for what he had done, and done so well, in his own, as well as in the public interest. Those who brought this matter to a practical and successful result must be deemed benefactors to their country.

Mr. RUSS, C.E. (Visitor), said that he had no intention when he came of addressing the Meeting, but looking to some of the observations which had fallen from gentlemen this evening, he felt he ought not to remain silent. He would merely give them a plain statement of facts, showing what had been the actual outlay, upon a farm of 160 acres, for the works which had been carried out and completed at Enfield by the firm of which he was a member. Land for irrigation having been obtained, the local board undertook to promote the necessary works for conveying the sewage to the farm, the proprietor of the land bearing the whole expense of laying out the land to receive it, at the same time guaranteeing the board against the consequences of any actions for nuisance. The land had been let, up to Michaelmas last, at 50s. per acre, but after the completion of the works it was let at £12 per acre,—not to speculators, but to men of business, who cultivated the land for market-garden purposes, and were also salesmen in Covent Garden; and their experience told them that whenever any of the produce of the sewage farms of Romford or Barking was brought into market, nothing else was looked at by the buyers till it was cleared off. He thought it might be of interest to the Meeting if he quoted a portion of the report of the surveyor to the local board in reference to this work:—

“The sewage is conveyed from a collecting tank situated in South Street, Ponder’s End, near the railway station, by gravitation, in a brick culvert 2 feet 3 inches diameter, to Mr. HARRISON’S farm, where it is received into an open cut and a reservoir capable of storing thirty hours’ flow. Adjacent to the reservoir a pumping station has been erected, with the required means of lifting and distributing the sewage over the land on which it is to be disposed of. The engine is of eight-horse power, with two pumps, the powers of which are, respectively, to lift 500 and 1,200 gallons per minute into the distribution troughs, or carriers, composed of wood, raised above the surface of the ground. When the engine is working at full speed these pumps are capable of throwing a much larger quantity; no apprehension, therefore, need exist as to their capacity to deliver a volume of sewage very much in excess of any they are likely to have to deal with from the Enfield district. In case of accident to the engine, there is a considerable portion of the farm upon which the sewage can be delivered by gravitation without pumping, during repairs, &c. The sewage is lifted, generally, about 10 feet into the carriers, which are about 4,000 yards in length. At intervals of 33 feet, sluices are attached to these troughs or carriers, from which the sewage flows into the secondary distributing channels, which are similar to those at Romford and other sewage farms. By these means the whole of the land is irrigated on the surface. The land has been subsoil drained throughout, and the purified water passes away through these drains.”

He might mention that the whole cost of these works, including subsoil draining, was £2,145 for the 160 acres. The drains were 4 feet deep, and the increased rental would pay the whole cost of the works in two years.

The soil was clay, with a gravel subsoil, and about 18 inches of good earth. The expense of taking the sewage from the outfall was paid by the local board.

The PRESIDENT: Then the sewage was obtained for nothing?

Mr. RUSS said that was the case.

Mr. JOHN CLUTTON (Past President) said that they were much indebted to the last speaker, as they had previously no record of the actual cost of the distribution of sewage. He (Mr. CLUTTON) stated last year, that the Reigate Board of Health had entered into a contract for the laying out of 40 acres of land, at a cost of £100 per acre. That did not include the expense of draining the land, which was a stiff clay, and he thought the price a monstrous one. The last speaker showed that drainage was carried out with advantage, even when the clay overlaid gravel, and the utmost cost of the whole operation of preparing the land for sewage in the case of Enfield was only about £14 per acre. He entirely dissented from those who contended that it was improper to drain clay land for the distribution of sewage. On the Reigate Farm he had lately seen a crop of rye grass which looked yellow, a condition which he attributed mainly to the absence of drainage.

Mr. RAWLINSON said that Birmingham could not be quoted as an instance of sewage irrigation, except as to what to avoid. The injunction had been issued with reference to depositing the solid portions of the sewage, which amounted to something like 1,000 tons per week,—the volume of sewage being about 18,000,000 gallons per day, while the area of land for its distribution was only 150 acres of flat, swampy ground. The sewage operations (experiments) in that town were attended with a loss of about £700 a year.

Mr. HOPE remarked, with reference to the A B C products, that he received information from two farmers who had visited his farm at Romford that they had used the

A B C manure, at a cost of £5 per ton, without having perceived any beneficial effects from it, although they had applied as much as double the prescribed dose.

Mr. P. D. TUCKETT (Member) said that, if the opinion of Professor VOELCKER was of any value, it simply extinguished the A B C process; because he proved, in the *Agricultural Journal* a few months ago, that what they were selling for £3 or £4 per ton was not worth more than 15s. Possibly, some discovery might yet be made by which soluble manurial matters could be rendered insoluble for a time, and afterwards made soluble again when required in that condition, in order to be assimilated by the roots of plants; but so far as present results had gone, it appeared that, in separating the solid portion from the liquid, the most valuable products of the sewage must necessarily be lost.

Mr. JOSIAH HUNT (Member) remarked that, from what he had heard, the guano obtained by the A B C Company in Leamington had been attended with success, and he thought any decided opinion ought not to be expressed until more information on the subject had been gathered, especially as works were being erected at Crossness which would soon be in operation.

Mr. RAWLINSON said that the A B C Company's operations at Leamington were being abolished root and branch: and steam-engines had been provided by the Local Board for pumping the sewage upon land, provided by Lord WARWICK.

Mr. MORGAN, in reply upon the discussion, said, with respect to the request made for more information than was furnished in his Paper, he would ask them to look at his report in conjunction with the Paper in that report, in which he gave all the information he was able to afford with

regard to average crops as well as the maximum returns obtained from the farm. Gentlemen would give him credit for endeavouring to prove the value of sewage applied to land, looking to the fact that a return of over £700 was obtained from a little over 9 acres, a return which he thought must be regarded as a large one, and which had not, he believed, been reached by any other sewage farmer. The real object of his Paper was to show what had been done upon the Lodge Farm. With regard to the alleged waste of sewage on that farm, he (Mr. MORGAN) submitted that Mr. HOPE had no means of ascertaining what quantities of sewage were used, and of judging whether there was waste or not. The quantity of sewage delivered upon the farm, was calculated by the number of strokes at which the pumps were ordered to be worked; was again checked by the measuring boxes upon the farm; and subsequently tested by measurement in the water-tight wooden troughs, which distributed it to the various plots. It was competent for any gentleman to test for himself the quantity of sewage delivered, and he submitted that Mr. HOPE had no right to dispute the quantities which he (Mr. MORGAN) had brought before them. He would not waste time by entering into a discussion upon Mr. HOPE's lecture upon large and small beds. Personally, there was no real necessity for him to defend the large beds on the Lodge Farm as they were laid out by Mr. MORTON, whom all regarded as a high authority in such matters; but he certainly preferred them, for many reasons, to the small ones. And until Mr. HOPE had succeeded in producing as good crops as had been grown on the Lodge Farm, and had consumed 10 tons where 100 tons were now used in producing them, he (Mr. MORGAN) declined further discussion. The great object which they all had in view was to utilize the sewage which was now running to waste; and he thought that their aim ought to be, in the first instance, to get it on the

land instead of splitting straws as to the number of tons proper for a dressing. With regard to the drainage of clay land, there could be no doubt as to the accuracy of the views expressed by Mr. CLUTTON, and he believed that all sewage farmers must accept the fact that subsoil drainage was needed. Of course on heavy land it was more necessary than on light land, although both, he thought, should be drained. He had lately been making drains through clay land with a substratum of gravel, and they were acting in a satisfactory manner. Mr. HOPE had ridiculed the idea of 600 tons of sewage per acre being applied to grass. What had been done, whether rightly or wrongly, was this:—In order to save the crop during an exceptional season, and to endeavour to cut it in the state which Mr. RAWLINSON had just recommended, viz., when it was in good flag, he was obliged to put on large quantities of water, and notwithstanding this, the sun, together with the hot gravelly soil, nearly burnt up the grass. The application of farm-yard manure to land under sewage cultivation required a good deal of consideration, but he was convinced that it would occasionally be found necessary. When they applied liquid only, to anything but porous land, it would cake and set the soil, and the ploughing under such circumstances was very different to ploughing soil under the ordinary methods of cultivation; but the question of employing farm-yard manure on land under irrigation was not a new one. Professor VOELCKER had given evidence on that point, and Mr. MORTON thought it advisable to employ it occasionally, in order to give strength to the young plants and enable them to derive the fullest benefit from the sewage. There could be no possible objection to it, as the manure could be produced on the farm. When the Lodge Farm was first started, it was intended to grow nothing but rye grass, and to feed stock; but more ambitious views were now entertained, and his returns showed that they were

competing with their neighbours in market gardening, and to do so successfully they must use dung. It was a fact that land would cake if it was continually being wetted, and if any proof was necessary, it would be found in the fact that Mr. HOPE, by continually wetting his land at Parsloes, had converted it into what he termed brick earth, which would not grow any crop at all. With regard to the use of wooden troughs, he did not say they were the best; but, when this farm was first taken, the desire was to avoid frightening farmers by the expense of laying out the land for sewage. The wooden troughs were used because they could not satisfactorily ascertain the quantity carried on to the beds through the earthen carriers. On the question of health, he could only say that the men employed on the farm, as well as their families who lived on the spot, had not suffered the slightest ill effects.

The PRESIDENT said he was quite sure the unanimous feeling of the Meeting was that they were very much indebted to Mr. MORGAN for adding to their information on this important subject, and also to the gentlemen who had taken part in the discussion upon it. The more the question was investigated and discussed the greater would be the benefit to the country. Up to the present time, the sewage was polluting the rivers, and the great difficulty was to know what to do with it. He believed the time was arriving when that difficulty would be solved, by evidence of the great advantages which resulted from its application to the land, both as a means of disposing of it, and also of increasing the productive powers of the country to a very considerable extent.

The Meeting then adjourned.

RATING AND LOCAL GOVERNMENT.

ABSTRACT OF

" A Bill to amend the law relating to Rating and Local Government." Prepared and brought in by MR. GOSCHEN, MR. STANSFELD, MR. SECRETARY BRUCE, and MR. W. E. FORSTER. Ordered by the House of Commons to be printed, 4th April, 1871.

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RATING AND LOCAL GOVERNMENT.

PRELIMINARY.

1. "The Rating and Local Government Act, 1871." Short title.
2. Except as otherwise provided, not to apply to Scotland or Ireland, or any parish or place to which the Valuation (Metropolis) Act, 1869, extends. Application of Act.

PART I.

RATING.

3. The following enactments shall be made with respect to making and assessing rates; that is to say, Making and assessing rate.
 - (1.) From and after the 5th April, 1872, a rate, called a consolidated rate, to be made and levied yearly in every parish at an equal rate in the pound on the full rateable value of every description of rateable property situate in such parish :
 - (2.) All sums leviable or which might, if the Act had not passed, have become leviable, as or in the nature of a rate within a parish or part of a parish for parochial expenses, or by way of contribution to any rate or fund, shall, from and after 5th April, 1872, be paid out of the consolidated rate of such parish on the requisition of the authorities entitled to demand payment of such sums :
 - (3.) Authorities to be entitled to demand payment of sums out of the consolidated rate :
 - Any parochial or other authority expressly or impliedly authorised under any existing or future law or any custom to do all or any of the following things :
 1. To levy any rate, &c., within such parish or any part thereof, or any area comprehending such parish or any part thereof ;
or
 2. To incur any expenses payable by or charged on any such parish or any part thereof, or payable by or charged on any area comprehending such parish or any

part thereof; or any expenses for the payment of which such parish or any part thereof, or any area comprehending such parish or any part thereof, is expressly or impliedly liable; or any expenses for the benefit of any such parish or any part thereof, or for the benefit of any area comprehending such parish or any part thereof; or

3. To incur any expenses payable out of a common fund, to be contributed by an area of which such parish or part of such parish is one of the constituent portions; or
 4. To make a requisition on such parish or any part thereof, or any area of which such parish or part of such parish is a constituent portion, or to raise a fund by requisition within any area comprehending such parish or part thereof:
- (4.) Every parochial and other authority entitled to make a requisition out of the consolidated rate shall, not less than thirty days before the 5th of April in every year, serve on the chairman of the parochial board of such parish appointed in pursuance of this Act, a precept stating the estimated sum or sums required by such authority to be paid out of the consolidated rate during the period of twelve months following the said 5th of April:
- (5.) As soon as may be after the said 5th of April in every year the chairman of the parochial board shall cause a consolidated rate, in this Act called "the annual consolidated rate," to be made sufficient to satisfy the amounts demanded:
- (6) (7) and (8) contain provisions as to the separation and application of the funds collected for the various purposes demanded by the precepts.

Levy of rate.

4.

- (1.) Consolidated rate to be levied by four equal instalments, paid quarterly, or as may be fixed by chairman, when rate is made:
- (2.) A demand note to be served on every occupier, stating particulars:
Amount due to be paid within seven days, or payment may be enforced by summary order;

- (3.) Chairman to pay to each authority quarterly the amount due under their precepts:
- (4.) "Poor Rate Assessment and Collection Act, 1869," and other Acts, relating to poor rates, to apply to consolidated rate.
- 5.
- (1.) Where the occupier of any rateable property who has paid any instalment of the consolidated rate pays a rent in respect of such property, he may, if the rent paid by him is not less than the rateable value of the property, deduct from such rent one half of the sum which he has paid as rate; but if the rent paid by him is less than the rateable value, he may deduct from each pound of the rent which he is liable to pay one half of the sum in the pound which he has paid as rate, and so on in proportion for any less sum than a pound: Liability of owners for rate.
- (2.) Where any person receiving rent in respect of any rateable property also pays a rent in respect of the same, he may deduct from the rent so paid by him a sum bearing such proportion to the amount of rate deducted from the rent received by him, as the rent paid by him bears to the rent received by him:
- (3.) Where any person receiving rent in respect of any rateable property has agreed to pay rates or is rated under the said "Poor Rate Assessment and Collection Act, 1869," he shall, for the purposes of the provisions of this Act relating to rating, be deemed to be the occupier:
- (4.) Every person receiving in respect of any rateable property rent from which a deduction has been made on account of rate shall be deemed to be an owner for the purposes of this Act:
- Provided as follows:
- (a) That no deduction shall be made under this section by any occupier in respect of such portion of the consolidated rate as is paid by him in satisfaction of the precept of the council of a borough (Municipal Corporation):
- (b) That no deduction shall be made under this section by any occupier in respect of any portion of the consolidated rate which represents or is substituted for a rate which such occupier has contracted to pay by a

contract entered into before the passing of this Act.

- (5.) Any contract made by an occupier after the passing of this Act, by virtue of which he is deprived of his right to make a deduction from his rent which he would otherwise be entitled to make under this section, shall, so far as relates to such deduction, be void both at law and in equity.

Rating
franchises.

6. Rating and being rated to consolidated rate, for parliamentary and other franchise, to be equivalent to rating and being rated to poor rate and to payment of such rate.

PART II.

PAROCHIAL AUTHORITIES AND GUARDIANS.

Constitution
of Parochial
Authorities.

7.

- (1.) "Parochial board," consisting of a chairman and not less than two, or more than nineteen other members, to be chosen by the vestry on one of the first seven days in March every year :
- (2.) Board to come into office 5th April succeeding day of election, and vacate office same day in next year :
- (3.) Chairman to be owner or occupier of property of rateable value of not less than £40, which need not be in the parish :
- (4.) Where parochial board is sanitary authority not less than half the members of that board to be qualified in prescribed manner, so that a higher qualification be not required for any member than for chairman :
- (5.) Parochial board to be a body corporate, with power to acquire and hold lands, &c. :
- (6.) Parochial Board to be the superintending authority in the parish and to exercise powers as to the rating of owners instead of occupiers, and such other powers as may be delegated by the vestry :

After first meeting of parochial board all property, rights, duties, obligations, liabilities, &c. (except as otherwise provided), of overseers, churchwardens, inspectors of lighting, &c., surveyors of highways, to vest in parochial board :

- (7.) Parochial board to appoint collector, clerk, &c., subject to certain approval, &c., by Local Government Board :

- (8) Chairman of parochial board to preside at meetings of vestry and parochial board, &c:
- (9) Guardians and waywardens to be elected and vacate office same day as parochial board:
- (10.) Provision as to elections in highway parishes to which foregoing regulations would not apply :
- (11.) Offices of chairman of parochial board, guardian and waywarden, may be held by one person :
- (12.) Every person, male or female, of full age, not legally incapacitated, who is rated as *occupier* within the parish, or registered in pursuance of this Act as *owner* of any hereditament in the parish, entitled to vote and constitute the vestry of a parish :
- (13.) Candidates for election to be nominated in writing, and if more candidates than required for vacancies the election to be by ballot :

8. *Ex officio* members of Boards of guardians to claim their right and declare their intention of acting in any year in order to be entitled to act as guardians. When in any year the number of official members is less than one-third the whole number of Board, the chairmen of the several parochial boards in the union at a special meeting to "select" guardians to make up one-third, such selected members to be either chairmen or qualified to be chairmen of parochial boards. Candidates to be nominated in writing and selected by ballot.

Constitution
of Board of
Guardians.

9. Boards of guardians to come into and vacate office on 5th April every year.

PART III.

COUNTY AUTHORITIES.

10. Board in every county to consist of (1) Lord Lieutenant, (2) Chairman or chairmen of Quarter Sessions (3) Representatives of the Justices, (4) Representatives of every parish.

Constitution
of County
Board.

11. Parochial representatives to be elected by the chairmen of parochial boards for every petty sessional division of the county. Chairmen of parochial boards in the division only eligible as representatives. Number of representatives in each division to be determined by justices, subject to approval of Local Government Board.

Election of
County
Board.

Representatives of justices to equal in number the parochial representatives, and to be chosen by justices at first quarter sessions in every year. Justices of the county only eligible.

A parochial representative may sit for more places than one, but to have only one vote.

All candidates for county boards to be nominated in writing and elected by ballot.

Legal status
of County
Board.

12. County board to be a body corporate with power to acquire and hold lands. Members to come into office and vacate on 5th April every year.

Counties
defined.

13. Any riding, division, or part of a county having a separate commission of peace, or separate division for county rates, and such parts of Middlesex, Surrey, and Kent, not included in "Valuation Act, 1869," to be deemed a separate county; Sussex to be an undivided county. The liberties of St. Alban's, Peterborough, and Isle of Ely to be as separate counties.

Business of
County
Board.

14. Trial of offenders, judicial business, government of prisons, &c., to remain with quarter sessions: otherwise all rights, duties, obligations, property, liabilities, &c., of quarter Sessions to be vested in county board.

Clerk of peace to be clerk of county board.

Power of board to appoint committee.

On any question of expenditure, representatives of the divisions not contributing to such expenditure, not to vote.

"Judicial business" to include hearing applications for licenses, &c.

County board to make requisition on parishes for payment out of consolidated rate of county rate.

15. Board may delegate executive power to committee.

16. Any question as to jurisdiction of county board to be determined by quarter sessions, with appeal to Local Government Board.

PART IV.

SANITARY AUTHORITIES.

Sanitary
districts.

17. Not later than 5th April, 1872, districts to be established called "Urban Sanitary Districts" and "Rural Sanitary Districts."

Urban Sanitary districts and authorities.

18.

Urban Sanitary District.

Sanitary Authority

An Improvement Act District
A Borough

The Improvement Commissioners
The Council

Parish with a population of
not less than 3000

The Parochial Board

A Local Government District

The Local Board

19. A union, no part of which is within the limits of an urban sanitary district, to constitute a rural sanitary district, also any part of a union not within an urban district, and the sanitary authority to be a board chosen as hereafter mentioned. Rural districts and Sanitary authorities.

20. The sanitary board to consist of representatives of every parish and outlying part of a parish in the district. The representatives of a parish to be the chairmen of the parochial boards, and the guardians of an outlying part to be the guardians of such outlying part.

For the election of guardians an outlying part to be a separate ward and elect a separate guardian.

21. Sanitary board to be a body corporate, &c., and to come into and vacate office 5th April every year.

22. Sanitary board to appoint clerk, &c.

23. Local Government Board may alter boundaries, &c., of rural sanitary districts,

24-28. Sanitary authorities to exercise powers under Local Government, Lodging-house, Sewage Utilization, Nuisances' Removal, Labourers' Dwellings, Diseases Prevention, and other Acts. Provisions as to expenses, &c.

PART V.

SIMPLIFICATION OF AREAS.

29. Local Government Board may, after inquiry and subject to certain restrictions, unite small parishes or divide large parishes, each such division or union to be deemed one parish for purposes of the Act.

30. Neighbouring parishes may unite for any common purpose not otherwise provided for.

PART VI.

LOCAL GOVERNMENT BOARD.

31-37. A board to be established called "The Local Government Board," consisting of a president (appointed by Her Majesty, and holding office during her pleasure,) and *ex officio* all the principal Secretaries of State for the time being, the Lord Privy Seal, and the Chancellor of the Exchequer. Board may appoint two secretaries, assistant-secretaries, &c. The President and one of the secretaries to be capable of sitting in the House of Commons.

No payment to be made to *ex officio* members. President, secretaries, &c., to be paid such salaries as Treasury may fix.

Transfer of
powers.

38. Powers, duties, &c., of Poor Law Board, of Secretary of State, as to local government, public health, sanitary matters, highways, &c., and of Privy Council as to public health, vaccination under various Acts of Parliament, to be transferred to Local Government Board.

PART VII.

SUPPLEMENTAL PROVISIONS.

Additional
regulations
for making
rates.

Appeals.

39. Provides for form of precepts, distribution of expenses of making register, &c., and as to appeals.

- (4.) Any ratepayer may, within the prescribed time, appeal to a court of summary jurisdiction against any precept served on the chairman of the parochial board of his parish on the following grounds, and no other :

(a.) That the authority serving the precept has no legal power to serve any such precept ; or

(b.) Where such precept is for the purpose of raising a fund to which the parish is contributory in common with other parishes, on the ground that the sum required to be paid by such precept is larger than the proportion which ought to have been required :

- (5.) The court of summary jurisdiction appealed to may confirm, disallow, or modify the precept appealed against :
- (6.) The chairman of the parochial board shall give public notice in the prescribed form of the amount of the annual consolidated rate :
- (7.) Any person aggrieved may, within the prescribed time, appeal to a court of summary jurisdiction against a consolidated rate made and assessed in pursuance of this Act, on the ground that the sum proposed to be levied is insufficient for the payment of the requisitions, or some of them, payable out of such rate, or is wrongly apportioned. He may also appeal on the ground that the property in respect of which he is rated is unfairly valued, or on the ground that his name is improperly inserted in the rate, or the name of some other person is improperly omitted from the rate :
- (8.) A consolidated rate shall not be quashed by reason of any illegal item, or of the unfair assessment of any

property, or by reason of any other ground of appeal, and the collection of a consolidated rate, or of any item thereof, shall not be delayed by reason of any appeal, and the court of appeal shall, in all cases where any ground of appeal is sustained, rectify the rate and, if necessary, direct such a settlement of the moneys to be made as may be required for the purpose of making the whole of the rate consistent with law, and for returning to any ratepayer any moneys he may have unduly paid.

- (10.) Where a limit is imposed by Act of Parliament on the amount in the pound of the rate to be levied for any purpose, in estimating the fund to be raised under this Act for the purpose to which such rate was applicable regard shall be had to such limit, and the amount of such fund shall be adjusted so as to provide that the portion of the consolidated rate levied in each parish to raise such sum shall not exceed the limit imposed as aforesaid.

40, 41. Provision as to default of authority in making requisition at proper time, or in inserting items in rate or collection, &c., of rates.

42. Any person interested in consolidated rate may inspect and take copies without fee. Amendment of rate.

43. The parochial board may from time to time amend the consolidated rate made in pursuance of this Act, in manner following:—

By inserting the name of any person who ought to have his name inserted;

By striking out the name of any person who ought not to have his name inserted;

By making any other alteration which will make the rate conformable to law;

And no amendment so made shall be held to avoid the rate

Any person who feels himself aggrieved by any such amendment as aforesaid shall have the same right of appeal therefrom as he would have had if the matter of amendment had appeared on the rate originally made.

44. Rate books to be evidence.

45. Supplemental rate may be made in any parish by consent of Local Government Board.

PAROCHIAL AUTHORITIES.

46. Owner's name to be inserted in rate book by collector, on information of occupier. Penalty of £5 for wilfully false information. Owner whose name is not entered may have rate book Registry of owners.

rectified. If same person is owner and occupier, entitled to vote as occupier only.

Members of
parochial
boards and
"selected"
guardians.

47. Retiring members to be re-eligible; provisions for filling up vacancies and for insufficient elections. Persons exempt by law from serving as overseers to be exempted from serving on parochial board, but persons not exempted liable to a penalty of £20 for refusing to serve.

Duties of
overseers.

48. Regulations as to collector and paid officers.

49. Parochial board to nominate one or more of their members to act as overseers to administer relief, &c.

Parochial
property.

50. Ecclesiastical or charitable trusts now vested in overseers and churchwardens, or overseers only, to be vested in churchwardens only.

51, 52. Provisions for summoning vestries, and abolition of parish constable.

COUNTY AUTHORITIES.

53-57. Provisions for definition of counties and divisions for electoral purposes; evidence of qualification of members; expenses of elections, filling up vacancies, distribution of property and liabilities, &c., of existing authorities.

CENTRAL AUTHORITY.

58-60. Provisions as to use of seal of "Local Government Board;" execution of instruments, &c.

PAROCHIAL, COUNTY, AND SANITARY AUTHORITIES.

Disqualifica-
tion of
members.

61. Members not to hold office of profit or participate in contracts, &c., under penalties, except as shareholder in a company or interested in sale or lease of lands, &c., and then not to vote when such interest is in question.

62-64. Provisions as to minutes of proceedings, validity of Acts, non-liability of members personally, execution of instruments, regulations for conducting business, hire of buildings, &c.

Mortgages.

65-66. Any authority having power to raise a fund by requisition may borrow money on credit of such fund with sanction of Local Government Board for a term not exceeding 50 years; power to Public Works Loan Commissioners to advance money to authorities.

67-72. Provisions as to audit of accounts.

73. Powers to Local Government Board to make rules from time to time for carrying the Act into effect.

74-78. Provisions as to Sundays, penalties for neglecting duties, absence of proper officers, &c. Act not to affect any power vested in churchwardens or overseers for ecclesiastical purposes or any voluntary Church rate.

PART VIII.

TEMPORARY PROVISIONS.

79-88. Regulations as to arrears of present rates, existing mortgages, transfer of officers, books, papers, &c., compensation to present officers, first elections and meetings of boards.

PART IX.

LEGAL PROCEEDINGS.

89-94. Provisions as to appeal in case of invalid election, offences with respect to voting, forgery of voting papers, &c.

95. As to appeals and prosecutions under Summary Jurisdiction Act.

The "Court of Summary Jurisdiction," when hearing and determining an information or complaint, shall be constituted in some one of the following manners; either of two or more justices of the peace in petty sessions, sitting at a place appointed for holding petty sessions, or of one of the magistrates hereinafter mentioned, sitting alone or with others at some court or other place appointed for the administration of justice; that is to say, a stipendiary magistrate, or some other officer or officers for the time being empowered by law to do alone or with others any act authorised to be done by more than one justice of the peace.

96. If any party feels aggrieved by the dismissal of his complaint by a court of summary jurisdiction, or by any order made by such court on determining any complaint or information under this Act, the party so aggrieved may appeal therefrom, subject to the conditions and regulations following:

- (1.) The appeal shall be made to some court of general or quarter sessions for the county or place in which the cause of appeal has arisen, holden not less than fifteen days and not more than four months after the decision of the court from which the appeal is made:
- (2.) The appellant shall, within seven days after the cause of appeal has arisen, give notice to the other party and to the court of summary jurisdiction of his intention, to appeal, and of the ground of such appeal:
- (3.) The appellant shall, immediately after such notice, enter into a recognizance before a justice of the peace with two sufficient sureties, conditioned personally

to try such appeal, and to abide the judgment of the court thereon, and to pay such costs as may be awarded by the court :

- (4.) The court of appeal may adjourn the appeal, and upon the hearing thereof they may confirm, reverse, or modify the decision of the court of summary jurisdiction, or remit the matter to the court of summary jurisdiction with the opinion of the court of appeal thereon, or make such other order in the matter as the court thinks just. The court of appeal may also make such order as to costs to be paid by either party as the court thinks just.

This section shall not apply to any appeal by or against a county board, and any such appeal shall be had to one of Her Majesty's superior courts of law in manner provided by law.

97. No order of a court to be quashed for want of form, or be removed by *certiorari*, &c.

98. Boards may appear in any action, &c., by the chairman, or any person authorized in writing by him.

99. Rules as to service of notices, &c.

PART X.

100, 101. Definitions, &c.

LOCAL TAXATION.

ABSTRACT OF

"A Bill to make better provision respecting the liability of property to Local Taxation, and for transferring the Inhabited House Duty to the Parochial Authorities." Prepared and brought in by MR. GOSCHEN, MR. STANSFELD, MR. SECRETARY BRUCE, and MR. W. E. FORSTER. Ordered by the House of Commons to be printed, 4th April, 1871.

PRELIMINARY.

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|--|---------------|
| 1. "The Rating and House Tax Act, 1871." | Short title. |
| 2. The Act not to apply to Scotland or Ireland. | Extent. |
| 3. Except as otherwise provided, not to come into operation until 5th April, 1872. | Commencement. |

ABOLITION OF EXEMPTIONS.

4. "From and after the commencement of this Act, the occupier of every hereditament, corporeal or incorporeal, in any parish, shall be rateable in respect of such hereditament to the consolidated rate of such parish, and so much of any Act, whether public, local or personal, or private, as exempts any hereditament from the consolidated rate, or any rate which is payable out of the consolidated rate, is hereby repealed.

"Provided that no person shall be rateable to the consolidated rate in respect of any such church, chapel, or meeting-house premises, or part thereof, as is exempt from poor rate under the Act 3 & 4 Wm. 4, c. 30."

The Act to extend to every hereditament occupied or used by any department of the Government, or occupied or used for any public purpose, notwithstanding that the same may belong to or be vested in Her Majesty, her heirs and successors, or in any officer or department of State, or any other public officer, authority, or body, and the department, officer, authority, or body occupying, using, or having the management of, or control over, the same shall be deemed to be the occupier.

The occupier of an incorporeal hereditament to be the person who is in possession or receipt of the rents and profits thereof.

General rule
as to gross
and rateable
value.

5.

- (1.) The annual gross value of every hereditament, whether corporeal or incorporeal, shall, subject to the express provisions of this Act, be the annual rent which a tenant might reasonably be expected, taking one year with another, to pay for the hereditament, if the tenant undertook to pay all usual tenant's rates and taxes and the tithe commutation rent-charge, if any; and if the landlord undertook to bear the cost of the repairs and insurance, and the other expenses, if any, necessary to maintain the hereditament in a state to command that rent:
- (2.) The annual rateable value of every hereditament, corporeal or incorporeal, shall be estimated by deducting from the annual gross value of such hereditament the probable annual average cost of the repairs, insurance, and other expenses as aforesaid:
- (3.) So much of any Act, whether public, local and personal, or private, as directs the gross or rateable value of any hereditament to be estimated in any other way or according to any other basis or principle than that directed by this Act, or directs any hereditament to be rated at any other value than the gross or rateable value estimated in manner directed by this Act, shall be repealed.

Valuation of
buildings ac-
cording to
capital value.

6. Where the chairman of the parochial board is of opinion that any building, by reason of its size or structure, or of its being adapted only for some special purpose, or for any other reason, cannot be properly valued according to the annual rent which a tenant might reasonably be expected to pay for the same, the chairman may value the same under the provisions of this section.

The gross value of any building valued under the provisions of this section shall be a sum equal to four per cent. on such capital sum as a purchaser might reasonably be expected to give for such building in its actual state and existing mode of occupation.

The rateable value of any building valued under the provisions of this section shall be the gross value calculated as aforesaid, after deducting therefrom the like deductions as are allowed by this Act in the case of buildings.

Where a building is valued under the provisions of this section, every person shall have the same right of making an objection and of appealing on the ground that the same ought not to be valued under this section as such person may have on the ground of the incorrectness of a valuation list or of any assessment.

7. Where any land is occupied as a plantation or wood or for growing timber, the gross value and rateable value of such land shall not be less than they would respectively be if such land were occupied for the ordinary purposes of agriculture either as pasture or arable land.

Valuation of woods and plantations.

8. Where at the commencement of the Act any person holds a lease of a mine, and is not liable to be rated to any particular rate in respect of such mine, he may deduct from any rent or royalty payable by him one half of every sum payable in respect of or in lieu of such rate which becomes payable by him in respect of such mine during the continuance of the said lease.

Deduction of rate by tenant of mine.

The payment of any rate by the Act authorized to be deducted to be a good discharge for such amount of rent as is equal to the amount so paid.

9. No person to be liable to be assessed to the consolidated rate otherwise than in accordance with the Act in respect of any property in respect of which he is not by the Act made liable to be assessed.

No liability to be rated for other property.

10. Where any hereditament will in pursuance of the provisions of the Act become liable to the consolidated rate, such hereditament shall be inserted by the overseers or assessment committee in every valuation list which will come into operation after the commencement of the Act, and the liability of such hereditament shall be deemed to be an alteration which makes a supplemental list necessary in the metropolis for the year beginning the sixth of April, 1871, and a supplemental list shall wherever necessary be made accordingly containing such hereditament.

Including hereditament in valuation list.

HOUSE TAX.

11. From and after such day as may be fixed by an Order in Council, not being earlier than the commencement of this Act, the duties made payable by the Act 14 & 15 Vic. c. 36, shall in England cease to be payable to Her Majesty, and to be under the care and management of the Commissioners of Inland Revenue, and shall be payable to the chairman of the parochial board of the parish in which the house charged therewith is situate, and shall be applied by him in reduction of the consolidated rate, and shall be assessed and collected by the same persons as the consolidated rate, but the same shall be collected at the same time as it is collected at the commencement of this Act.

Transfer of house tax to parochial authorities.

In this section the term consolidated rate in the metropolis means the poor rate.

12.

The term "metropolis" means the parishes and places to which the Valuation (Metropolis) Act, 1869, extends.

Definitions.

The term "consolidated rate" means, as regards the metro-

polis, the poor rate, and any sewers rate, drainage rate, consolidated rate, and every other rate levied on the rateable value of property within the metropolis.

The term "chairman of the parochial board" includes the overseers and any person or body of persons performing the duties of overseers so far as regards the assessment, making, and collecting of rates for the relief of the poor.

The term "hereditament" does not include any rent (except tithe rent-charge), or any escheats, heriots, relief fines, casual profits of any manor, or any office, dignity advowson, corody, pension, annuity, or heirloom, except so far as the same confers any interest in any land or building.

Repeal of
Acts.

13. Acts repealed to extent mentioned in schedule, but this repeal not to affect the validity or remedy in respect of anything done under the provisions of such Acts before the commencement of this Act. Any enactment referred to in schedule, if relating to England only, to be wholly repealed, and, in any other case, only so far as it relates to England.

SCHEDULE.

- 43 Eliz. c. 2 . . . An Act for the relief of the poor. Repeal the following words in Section 1, "by taxation of every inhabitant, parson, vicar, and other, and of every occupier of lands, houses, tithes impropriate, or appropriations of tithes, coal mines, or saleable underwoods in the said parish," in "such competent sum and sums of money as they shall think fit," and the words "according to the ability of the same parish."
- 22 Geo. 3, c. 83 . . . An Act for the better relief and employment of the poor. Repeal Sec. 19.
- 3 Geo. 4, c. 126 . . . An Act to amend the general laws for regulating turnpike roads in England. Repeal Sec. 51, from "and that no tolls to be taken" to the end.
- 6 & 7 Will. 4, c. 96. An Act to regulate parochial assessments. Repeal Secs. 1 and 2.
- 4 & 5 Vict. c. 48. An Act to render certain municipal corporations rateable to the relief of the poor in certain cases. Repeal Sec. 1.
- 6 & 7 Vict. c. 36. An Act to exempt from county, &c., rates, land and buildings occupied by scientific and literary societies. Repeal the whole Act.
- 16 & 17 Vict. c. 97. An Act to consolidate and amend the laws for the provision and regulation of lunatic asylums for counties and boroughs, &c. Repeal Sec. 35.
- 17 & 18 Vict. c. 104. Merchant Shipping Act. Repeal Sec. 430.
- 18 & 19 Vict. c. 128. Burial Amendment Act. Repeal Sec. 15.
- 23 & 24 Vict. c. 112. Act for acquiring lands for the defence of the realm. Repeal part of Sec. 33.
- 32 & 33 Vict. c. 40. An Act to exempt from rating Sunday and ragged schools. Repeal the whole Act.

A DISCUSSION
ON THE
“RATING AND LOCAL GOVERNMENT”
AND
“LOCAL TAXATION” BILLS
NOW BEFORE PARLIAMENT.

*At the Ordinary General Meeting of the INSTITUTION OF SURVEYORS,
on Monday, May 1st, 1871.*

RICHARD HALL, PRESIDENT, IN THE CHAIR.

The PRESIDENT, in introducing the discussion, said these Bills were of much importance, proposing, as they did, great alterations in the mode in which property was to be dealt with for rating purposes; and it was thought by the Council desirable to give Members the opportunity of exchanging opinions with respect to them at as early a period as possible. A short abstract of the Bills had been prepared, and issued to each Member, in order to facilitate the discussion. There were two or three clauses in the Local Taxation Bill to which he would call attention, and make a few comments upon them. The first was clause 4, by which it was proposed to abolish all exemptions of property from rating, and to extend the liability to every hereditament occupied or used by every department of the Government—a provision which he considered very desirable. There was another clause to enact that all personal property should be entirely exempted from rating. That was practically the case at

the present time ; for, although the statute of Elizabeth was in existence, an Act was passed every year to annul that statute so far for the time being ; however, the effect of this Bill would be to enact that personal property shall not be rated.

He would next call their attention to clause 6, which appeared to him to require their careful consideration.

Clause 7 seemed to him to be a very remarkable one, as changing the nature of rating entirely. He did not object to the rating of woodland and timber as a principle ; but, under this Bill, they were to be dealt with in the same way as arable and pasture land. He would be pleased to hear the views of gentlemen upon that question.

He would next advert to the clause which made such a total change in the rating of mines. He believed that at present coal mines only were rateable ; but, under this Bill, it was proposed to make all other mines liable to rates.

By clause 11, the house tax was to be handed over to the chairmen of the parochial boards, to be dealt with by them.

He would now refer to the Rating and Local Government Bill. Section 2 of clause 3 provided that—

“ All sums leviable, or which might, if the Act had not passed, have become leviable, as or in the nature of a rate within a parish or part of a parish for parochial expenses, or by way of contribution to any rate or fund, shall, from and after 5th April, 1872, be paid out of the consolidated rate of such parish, on the requisition of the authorities entitled to demand payment of such sums.”

Then, in clause 5, it was stated—

“ Where the occupier of any rateable property who has paid any instalment of the consolidated rate pays a rent in respect of such property, he may, if the rent paid by him is not less than the rateable value of the property, deduct from

such rent one-half of the sum which he has paid as rate ; but if the rent paid by him is less than the rateable value, he may deduct from each pound of the rent which he is liable to pay one-half of the sum in the pound which he has paid as rate, and so on in proportion for any less sum than a pound."

If he understood that clause aright, it meant that every tenant at a rack-rent was to have the power to deduct half his rate and make the landlord liable for it, instead of being, as now, himself liable for the whole. The effect of that clause would be that the landlord would add to his rental an amount equal to half the rate, and, it might be, that he would put on more than half the rate. At all events, it would cause a good deal of discussion between landlord and tenant, which would be better avoided.

Clause 7 prescribed that in every parish there should be a parochial board, and the simple qualification of the chairmen of such boards was the ownership or occupation of property of the rateable value of £40, which need not be in the parish ; and section 12 of the same clause provided that—"Every person, male or female, of full age, not legally incapacitated, who is rated as *occupier* within the parish, or registered in pursuance of this Act as *owner* of any hereditament in the parish, shall be entitled to vote and constitute the vestry of a parish."

That extraordinary clause put the occupier of a cottage of the rateable value of £3 on a voting equality with the occupier of property worth £1,000 a-year ; and this seemed to him to be giving remarkable powers to people who had no interest in the rates, whether high or low. Then, again, section 13 of the same clause provided that—"Candidates for election shall be nominated in writing, and if more candidates than required for vacancies the election shall be by ballot." He must say that he thought the ballot an un-

satisfactory mode of dealing with the election of officers of parochial boards.

The Bill was a very voluminous one, but these were the principal points in it to which he would call attention. He would, however, make one objection to the observations of Mr. GOSCHEN in introducing this Bill, and to the tables furnished with regard to rating. Mr. GOSCHEN remarked that going back to the poor rates in 1803, and comparing them with 1860, at the former period, the rates amounted to 4s. 3d. in the pound, and at the latter to only 3s. 4d.; there had, therefore, Mr. Goschen argued, been no increase in the poor rates throughout the country. Now, everyone connected with land knew very well that rates had immensely increased, and that in all agricultural parishes that had been especially the case. To show the fallacy of Mr. GOSCHEN's statement, it was well known to gentlemen that in 1803, and coming down to 1835, property was assessed nobody knew how,—some at a fourth, some at half, and some at little or no value,—and in 1835 it was found necessary to make a re-assessment of it on the annual value. It would be found, therefore, that the poundage of the one period had no reference whatever to the other since the basis of assessment was different in the two cases.

Mr. T. HUSKINSON (Member) said that he was not so fully prepared as he could have wished to discuss the Bills in their entirety, but, coming from the country, and his business being for the most part connected with rural districts, he had watched these measures with interest and with a strong conviction that they embraced matters of great importance and worthy of the careful consideration of this Institution. The subject of these Bills came strictly within the province of surveyors, who ought, as a class, from their experience, to be able to bring to bear upon it as much

information as could be looked for from any other quarter. It was the duty of Members to give their best attention to these Bills, and, if deemed necessary, to take action upon them.

In the first place, with regard to the rating of timber, it was well known that from a remote period, indeed from the first establishment of poor rates, timber was not subject to rates or to tithes. The reasons for this exception could not be accurately determined, but it arose, in all probability, from the difficulty of ascertaining the annual value or income derivable from such property. That difficulty was as great now as it had ever been, and the discovery of any principle or mode of rating, as applied to property of that kind, would, he apprehended, be no easy matter.

The non-rating of timber must be regarded rather as an exception than an exemption; and there seemed to him no great occasion why timber should alone be now selected, for the first time, as a special matter of taxation. There were other forms of property hitherto excepted which might, with equal reason, be subjected to rates. If it were necessary to extend the area of rating, other and more important subjects than timber might, he thought, have been selected, such as personal property. As a mere abstract question, he did not see why timber growing with underwood should be exempt from taxation any more than other kinds of property producing annual income. He thought, however, that the amount which could be raised from this source would be inconsiderable; for in cases where oak timber was grown with underwood, in proportion to the extent to which the trees were multiplied, the value of the underwood was diminished; and as the latter was always rated, he did not consider that the increment with regard to timber would be considerable.

The question, however, was far otherwise as respected

ornamental timber grown in open lands, hedge-rows, and parks, which, without qualification, would seem to be included in this Bill. In his opinion it was undesirable that timber, under such circumstances, should be rated. All would agree with him how much the beauty of the country depended upon the ornamental character of the timber, and how much its charms and residential character were enhanced thereby. Very little of this ornamental timber had been planted or maintained for the purposes of income; and no one thought of cutting down ornamental timber of the highest character even at maturity; and, indeed, in a state of decay, it was frequently regarded as more picturesque than under other circumstances. When a man had planted and protected ornamental timber, which produced him no profit, it was manifestly unjust to impose a rate upon it and subject it to income tax, besides being extremely inexpedient as a matter of public policy. Then, again, he would ask how it was possible to fix the basis on which ornamental timber, growing in a park, should be rated? He alluded particularly to the old open forests in Notts, which many of the Members had seen, where there were trees of immense antiquity, from which no owner had received, or ever expected to receive, any income whatever. In a case of that sort, it would surely be extremely unjust to make the timber a subject of rating or taxation of any kind. What profit did the Duke of PORTLAND, the Earl MANVERS, and others, derive from the magnificent trees in their parks? The observations he had made applied to the principle of rating timber; but when he came to the mode in which the Bill proposed to apply that principle he could not but call it extremely unjust, because the proposition was this—to rate woods, not at the value they were producing to the owner as such, but at what they might be made to produce in some other form of cultivation—arable

or pasture, for instance. Was it wise in principle, or just to the owner, that other people should decide for him the manner in which he should employ his own property? What had hitherto been done in respect of rating and taxation was to take as the basis of calculation such an annual revenue as the owner himself derived from it. But here was another principle introduced, viz., not what the owner really obtained, but what it was presumed he might obtain if certain things happened which were never likely to happen, that is if he cleared all his woodland and devoted it to arable or pasture. He would take an ordinary case of woodland in the midland counties, where oak with underwood was grown. The underwood, after paying all expenses, was ordinarily calculated to yield a profit of about 10s. an acre per annum, and, as a rule, it was rated at about that sum. But the present Bill proposed that woodland should be rated on the same value as if such land were used as arable or pasture land. The exact meaning of the term "similar land" had been a subject of controversy under the Income Tax Acts. His own view had been that it meant a comparison of woodland with woodland; but the clause affecting this point in the Bill under discussion left no room for doubt that woodland must be rated as if used as arable or pasture land, although it would cost the owner £20 per acre to convert it. Assuming that he had 100 acres of woodland, which were rated at 10s. an acre, while the arable and pasture land adjoining was rated at 30s. an acre; taking the average rating of 3s. in the pound, his present rating for the 100 acres would be £7 10s. per annum; but under this Bill it would be £22 10s., or an excess of £15. Then with regard to income tax, the surveyor would say the 100 acres of land, being rated at so much to the poor rate, must be assessed at the same amount for income tax. The present income tax would be £1 5s.; while, under this Bill, it would

amount to £3 15s. ; thus representing in this case a penalty of £17 10s. per annum for the privilege of keeping 100 acres of land in wood.

He would come next to the assessment of mansions,—a question which had, in the country, been a constant source of difficulty as to the basis which ought to be taken in assessing the rateable value of mansions occupied by gentlemen living on their own estates. In respect of house tax, income tax, and poor rates, the appeals were frequent. The present rule was to estimate what the house would let for in the market. Some houses were let in this manner, and, having such instances to refer to, there was not much difficulty in keeping the rateable value of mansions at something like a fair and just value. There was an extreme desire, however, on the part of the surveyors of taxes to surcharge these mansions, a fact which gave rise to constant appeals, in order to prevent their assessment at a higher value than the rent which it was found in practice could be obtained for those houses when they were to let. To remedy this state of things, these clauses appear to have been introduced; and mansions were now to be assessed at their supposed selling value. Before it could be ascertained what a property would sell for, it was necessary to have some knowledge of its annual value. Therefore, this new principle of valuation was not only novel but unpractical. Anybody who could estimate what a mansion would let for would have little difficulty in estimating what it would sell for. He would like to know how such a mansion as Belvoir Castle was to be rated on the principle laid down in the Bill. Such a building must be considered as divested of the estate and these local associations which gave value to it. It struck him the principle was novel, unnecessary, and difficult to carry out practically, and he objected to it on those grounds.

The next point he would refer to was the question of house tax, and upon that, "*per se*," he had but little to say. The remission of this to Local authorities would not satisfy present discontent. But really this Bill, entitled "Local Taxation," ignored the question which had presented itself for years past, whenever the incidence of Local Taxation had been considered. The real question was, whether it was just in this country to go on levying thirty millions of Local Taxation upon so narrow a basis as real property, amounting as it did to only one-seventh of the income of the country—that was what was meant when it was said that the incidence of taxation was unjust. His own view was that this Bill merely touched the fringe of the question, and did not meet this difficulty—a difficulty now felt by a large class of people in this country, and which must be met and answered before any legislation could be satisfactory. Most of the Members present had, no doubt, read the report which was presented by Mr. GOSCHEN before the Easter recess, a document of a very voluminous kind, and from the great mass of figures offering difficulties in the way of making very close comparisons. The following points, however, which he gathered from it, were important:—First, that there had been very little increase in the taxation of land from 1815 to 1808, compared with the increase in its annual value. The answer to that was, as the President remarked, that they could really say nothing as to what the rate in the pound actually was during the early portion of that period.

It was a well known fact that neither houses nor land were assessed at their real value until a comparatively recent date. It was admitted in the report to which he had alluded, that the amount of rates levied on the land was double what it once was. That was no doubt true; but the rent of land had increased in two-fold proportion; and

on those grounds it was urged that, although the rates had doubled in amount, the landlords obtained more rent, and had therefore no reason for complaint. He need not say how unsatisfactory that was to the occupier, inasmuch as he not only paid twice as many rates as when he took his farm, but in many instances twice as much rent. It was also unsatisfactory to the landlord, even when this increase of rent was considered and accepted as correct; for the increase was mainly the result of a considerable outlay of capital, either on his part alone, or conjointly with the tenant; and these augmented local burdens were calculated to have a discouraging effect upon exertions which were directed towards the development of the resources of the soil.

Passing to foreign countries, the report gave a great array of figures, showing a comparison of results between England, Belgium, and France, and from which he gathered that we were a little better off than Belgium—which might be said to have been created only in 1830—in respect of taxation on real property, and a little worse off than France, which had been in a chronic state of revolution for the last eighty years. Nothing could be more unsatisfactory than such a state of things; for here we lived in a country where wealth and manufactures had progressed in a degree hitherto unparalleled elsewhere, and had enjoyed fifty years of almost uninterrupted peace. As compared with Prussia, the excess of burdens upon the land was enormous, and it was very unsatisfactory to be told that we ought to be content, because we were a little worse off than France, and a little better off than Belgium. There was one statement in the report which seemed to involve an extraordinary fallacy. Referring to the proportion of taxation contributed, respectively, by land and houses, it said, in substance: “You owners of land, of all people, have no right to complain, because it is found that whereas, a certain number

of years ago, land contributed so much to local taxation, and houses so much, you have now managed to shift the burden from your own shoulders to the shoulders of the householders, and the latter are paying more, while you pay no more." That argument ignored the fact that houses might be multiplied, but land could not be increased in quantity, therefore, the number of houses must be ascertained which existed at the period of comparison. He would take the case of Nottingham, where the number of houses, in the last twenty years, had increased 50 per cent. If it were said to the house-owner in that case, "I find you are paying more taxes than you were twenty years ago," he would reply, "I am not aware that I am paying more for the house in which I live, but there are now two houses to pay the rates instead of one." He (Mr. HUSKINSON) did not believe there had been that change as regarded houses and land, taking specific houses and estates in land.

He would now pass on and say a few words upon what was called the Rating and Local Government Bill; and, in the first place, he would premise that there were many of its provisions which appeared to him to be extremely good, and which he hoped to see passed into law. Other clauses were capable of improvement, which he hoped to see effected. He thought the arrangement for the consolidation of all rates into one rate for each parish an excellent one, and hailed it with satisfaction. He approved also of the plan of reconstructing each parish into a corporation. The abolition of courts leet and courts baron had been felt as a loss in rural districts which, though they had been overrun with modern legislation, were yet left, practically, without the power to do that which, under those courts, could have been cheaply and promptly done. Having gone so far, he regretted that the Bill stopped short of giving to rural parishes, below a certain amount of population, the power of dealing with their

own sanitary matters. Under the Bill, sanitary matters, in parishes with a population under 3,000, were remitted to the boards of guardians, an arrangement which, in practice, would be as ineffective as any which could well be devised. He felt so strongly on this point that he offered himself as a witness before the Sanitary Commission, and gave evidence upon the relative condition of parishes in England and in Scotland, because he had seen parochial matters dealt with in Scotland in a more prompt and effective manner than any parish in England could deal with them. He regarded it as a great defect in the Bill that sanitary authority should not be given to the parochial boards in all rural parishes with a population above fifty persons. He concluded that in such parishes sanitary authority ought to be delegated, as well as the power of levying rates; because it seemed that the Bill, in establishing this local machinery, gave the parish authorities nothing useful to do beyond the levying of rates; for the local boards were not guardians or waywardens. Taking the average of parishes, he was at a loss to see, after the chairman and other members of the board had levied the rates for the year, what there remained for them to do. What was most wanted was the means of dealing with sanitary matters. Such matters could be most effectively dealt with on the spot; but, under the Bill, those small parishes were remitted to the boards of guardians, the members of which would be taken, in some cases, many miles from their homes to discuss sanitary matters which had to be carried out in their own villages. The result would be that the best men would not go seven or ten miles to discuss a matter which they could attend to better at their own doors. The consequence was that they would get inferior men in these offices, and the work, if done at all, would seldom be done well. This Bill had one good feature, it combined the element of ownership as

well as that of occupier. The present difficulty was that the owner had no representative on the vestry, and the tenants were the only parties with any power. But the tenant had only a temporary interest in the occupation, and was a man, perhaps, who did not take a great deal of interest in sanitary matters. He might argue that they would be costly,—might entertain a doubt as to their importance,—and consequently give himself the benefit of the doubt. The owner, on the contrary, had a permanent interest, and was generally a man of superior intelligence, feeling an interest in these things. He (Mr. HUSKINSON) thought, therefore, that the best results would arise from the introduction of the element of owner with that of occupier, if they had the power to act at home. He repeated his opinion that it was wrong to limit sanitary authority to parishes with populations of 3,000 only, and to remit these functions in other parishes to boards of guardians, the parties who discharged them now, and so inefficiently.

He thought it unfortunate that the division of rates between owner and occupier had been introduced into the Bill, inasmuch as it interfered with freedom of contract, and would practically have the effect of leading to an immediate review of arrangements, which, when once made between landlord and tenant, usually subsisted for a number of years. It was undesirable in his opinion, in many respects, that there should be such a division of rates as this Bill contemplated, more particularly as respects that clause which enacts that future contracts between landlords and occupiers should, as to payment of rates, be void and of non-effect.

The voting clauses whereby every person was to have equal votes whether he paid 1s. or £40, were, he thought, extremely objectionable. He said this with reference to his own experience in Nottinghamshire, where a large expenditure had been incurred in some parishes for

sanitary purposes and the establishment of water supply. Persons who paid very little to the local rates were glad to have the water brought to their own doors, while the farmers, who had to pay the greater part of the cost, had no advantage from it. He thought the effect of that mode of voting would be that a large class of persons would have the power to vote expenditure, while the minority would have to find the money. He saw no reason to depart from the present practice of voting according to the amount at which people were rated.

Upon the whole, he thought the Bill contained many elements which it was desirable should become law, but it wanted careful sifting and considerable amendment before it ought to pass; and it would be a great advantage to have the opinion of Members of this Institution as to the probable operation of these clauses, and the best mode of amending them.

Mr. T. F. HEDLEY (Member) said that he had not given so much attention to the Rating and Local Government Bill as he had to the Local Taxation Bill. The last clause in the latter Bill, partly repealing the old statute of Elizabeth and the Parochial Assessment Act, upon which all our present taxation was based, struck him as being of very great importance. He thought that the passing of the Bill in its present shape would unsettle the whole law of rating with regard to every description of property. The schedule to the Bill provided that the Act 43 Eliz., c. 2; and also sec. 1 and 2, 6th and 7th William IV., c. 96 should be repealed. On these Acts all rating of property of every description was now based. The previous speakers seemed to construe the word "building" in clause 6, as applying solely to gentlemen's houses; he (Mr. HEDLEY) thought, however, that it would include blast furnaces,

glass works, and chemical works. It was well known to many present that, under the authority of "*Regina v. The West Middlesex Waterworks Company*," it was laid down as law that, where a tenant for a large property could not be found, a hypothetical tenancy should be assumed. The tenant was assumed to pay the rent of the land and adequate remuneration for the capital expended thereon. This practice had generally been followed in the north of England, and it had never been questioned. The misfortune was that this clause laid down a hard and fast line, upon which the gross estimated rental of such property was to be based. He quite agreed that in many cases it was impossible to find the gross value of a property by comparing it with others capable of being let to yearly tenants—such buildings, for instance, as Raby Castle and Lambton House. In cases of that kind it was not possible to determine with any exactness the letting value from year to year; and it was admitted that nobody would take a large castle of the kind and furnish it as a yearly tenant. It was necessary, therefore, to have recourse to some other rule. This was equally true with respect to blast furnaces, and large works generally, which could not be let from year to year; and the same remark applied to another class of buildings, viz., railway stations. In the case of many large works, the proposed 4 per cent. on the purchase price as the gross rent, assuming that the landlord did all repairs, there would, in many instances, be nothing left to rate. A hard and fast line of 4 per cent. was simply absurd, for what would be an adequate remuneration upon a gentleman's castle or mansion, would not be adequate remuneration upon a blast furnace or glass works. The way in which he dealt with such cases was, to take the capital value of a property which would not let, at that reasonable price which it might be expected to sell for if put into the

market; and to vary the rate of interest according to the class of property. Mansions were generally taken on an estimate of $3\frac{1}{3}$ per cent., while railway stations were taken at 5 per cent. and blast furnaces at $7\frac{1}{2}$ per cent., deductions being made in all cases on the assumption that the landlord undertook a fair share of the repairs and insurance. By way of illustrating the effect of this clause he would mention that he knew of large works which cost £25,000. The gross estimated rental upon that sum, at 4 per cent. would be £1,000 a year. The average annual cost of repairs and insurance and other expenses to maintain the works amounted to from £1,500 to £2,000 a year; therefore, to deduct £1,500 or £2,000 from £1,000 would leave nothing to rate. So much for the hypothetical tenancy provided by the Bill.

With respect to the rate upon woodland, he had failed to see anything in this Bill which led to the rating of wood and timber as such. In his opinion the good old statute of Elizabeth was comprehensive enough to bring every acre of land into assessment which produced, or was capable of producing, annual revenue. In rating Lambton Castle, he never dreamt of rating the timber, but only the land within the enclosure, on the principle that no man had a right to carve out a partial occupation as he chose, and say that so much was rateable, and so much not rateable. It was just that people should pay for everything they occupied, and, under the authority of the case "*Regina v. Battle*," the privilege of killing game upon the timber was rated. He did not think there was any objection to the clause affecting timber.

He thought the proposed rating of mines, under clause 8, extremely hard upon the lessors of minerals. There were cases which had come under his notice where mines were demised under leases fifteen or twenty years ago, and

where the minerals had quadrupled in value. In such cases, rent was not conclusive evidence of value. It would be a monstrous injustice to make the lessor of the minerals pay half the rate upon a rent which he did not receive. A case came recently under his notice where, about twenty years ago, the minerals were demised at a price per ton which represented £500 a year. The present value of those minerals was £2,000 a year. The lessee's plant and the surface land represented a capital of £20,000. The annual value of £20,000, at 5 per cent., was £1,000, which, with £2,000 for royalty, made £3,000. According to the provisions of this Bill, the lessor would pay one-half of £3,000 = £1,500, while he was only receiving a rent of £500. Surely, nothing could be more unjust. He was reminded that there was a clause providing that the deduction should not exceed the rent; but, unfortunately, that clause was not in this Bill but in the other, and the one Bill might pass while the other was rejected.

The term "incorporeal hereditaments" was creating great uneasiness throughout the country. The conservators of navigable rivers were concerned to know whether the tolls they received for maintaining the navigation were liable to be taxed. He thought it would be just as unreasonable to rate such dues as it would be to tax the highway rates.

A great deal of fault had been found with Mr. GOSCHEN for not widening the area of local taxation, by bringing into assessment other property. There was a wide-spread opinion that personal property ought to be rated. He (Mr. HEDLEY) had had twenty years' experience in rating personal property in Sunderland, under a local Act, and he could say that there was nothing more unsatisfactory, and apparently inquisitorial, than entering a merchant's counting house, or a tradesman's shop, to estimate the value of his

stock. He had come to this conclusion—as far as personal property, and particularly stock-in-trade, was concerned—that it was not possible to bring it into parochial assessment. If the experience of the superior courts were referred to, when stock and trade was rateable, it would be found that the judges stated that the Courts of Quarter Session would have done well if they had abstained from rating that description of property, since the difficulties of doing so were too great to enable anyone to make a satisfactory assessment.

Another outcry was raised about the rating of shipping. The effect of rating shipping in the port of Sunderland, under the Local Act was—That every shipowner residing in Sunderland was rated to the local rates, while the owners of foreign ships frequenting it, escaped. While he thought it unfair to assess shipping on that principle, he was quite alive to the fact that a large amount of expenditure was incurred in seaport unions, on account of sick, maimed, or insane seamen, and which was a burden upon the rates. In many foreign ports to which English shipowners sent their vessels, if a sick or insane, or injured seaman was left behind, the owner was charged with the cost of care and maintenance, and also had to pay an hospital rate. He thought it would be a proper thing to impose a hospital tax upon all shipping frequenting English ports and that tax should go in aid of the rates for the relief of the poor.

He felt that this measure would greatly unsettle the law of rating, and he told a barrister friend that the Bar should pray for its passing, as he was sure it would afford a fertile source of litigation and of profitable income to the lawyers.

Mr. W. BROWN (Member) said that, hitherto, beech woodlands had been exempted from poor rates, and

the mode in which it was now proposed to assess woodlands, viz., at the value of arable or pasture land adjoining, would be most unfair, amounting as it did to double, at least, what they ought to pay. He was rather in favour, however, of their being rated to the poor with the general rate. Another point to which the PRESIDENT had directed attention, and to which Mr. HUSKINSON alluded, was the power given to persons who paid little or nothing towards the parochial rates to exercise equal voting powers with large owners and occupiers of property. A majority of such persons would thus have the power of swamping the large owners and occupiers. He had ascertained, in two parishes, the proportion which those persons bore to those who paid rates, and he found, in one case, that it was exactly 3 to 1 of persons entitled to vote who paid nothing towards the rates, whether they were 1s. or 4s. in the pound. This was giving far greater power than was conferred by the Representation Act. There was one point which had not yet been touched upon, which this Bill would materially affect. He was chairman of a local board, and the way in which they levied the district rates for sanitary purposes, lighting, &c., was this,—a rate was made at 2s. in the pound, but the land only paid one-fourth, or 6d. in the pound. As he understood this Bill, that reduction in the case of land would be done away with, and hereafter land would have to pay the same proportion as house property.

Mr. C. CADLE (Member) said that there was one point touched upon by Mr. HEDLEY, with regard to the rating of woodland, which required explanation. Larch plantations, under the present law, were exempt and paid no rate, neither did timber. Mr. BROWN had also said the same in respect of beech plantations. Another point to be considered in

connection with the subject was that coppice woods, which formed the majority of the woodland at present rated, were only cut once in eight, ten, or fifteen years. Therefore, the rates, tithes, and taxes were accumulating at compound interest during those years, and that had always been a rather important matter; but if it became law that these lands were to be rated to the same amount as the arable or pasture land adjoining, they would be rated at double or treble their value, and if that accumulated at compound interest, he did not know what would become of the owner of the woodland. It was well known that it cost from £15 to £20 per acre to stock, or grub up, and drain the woodland before it could be brought into cultivation. The proposed alteration would, therefore, be very unjust. It was a question whether the framers of this Act had taken the right course at all. Personal property was rateable under the Act of Elizabeth; therefore, if that statute was to be repealed, surely land was entitled to be placed on a footing of equality with other kinds of property, or, at least, not in a worse position than it was in now. As to the difficulty which had been alluded to of rating personal property, surely some one could be found in this country, which contained so many clever men, to devise means by which it could be done. Here they had £100,000,000 of real property paying the whole of the rates, while the whole income of the country was £800,000,000, and some means might, he thought, be discovered, by which the £700,000,000 (taking the income at £800,000,000) might be made to contribute a share towards the rates.

Another point with regard to the proposed Bill was, that a person occupying his own land was entitled to only one vote. If the person were both owner and occupier he was entitled to vote as occupier only.

The present system of rating was very bad, as the following fact would illustrate:—He occupied a small farm, which happened to be in no fewer than seven parishes, and his house in the eighth; the farm was about two miles out of Gloucester, and he had calculated that when the income and assessed taxes were collected, as they used to be, about eighty-four journies had to be made to his farm, in the course of the year, in order to collect them—supposing they had to go twice for each rate. He thought, therefore, that the consolidation of the rates, if there were to be rates at all, would be much to the advantage of the country.

Mr. E. RUSHWORTH (Member) said it would be in the recollection of some present that, on the 16th of January last, he introduced this subject to the Members of the Institution. He had good grounds for knowing at that time that Mr. GOSCHEN intended to bring forward the measures they were discussing. He particularly alluded to the proposal as to the division of the rates between owner and occupier. The Society of Auctioneers, at a meeting held last Thursday, thought it of such moment, that they resolved to take action by presenting a petition to Parliament. That had been done, and signatures having been obtained, it was that afternoon placed in the hands of an hon. member for presentation, and he suggested the desirability of some such course being taken by the Institution.

Mr. J. H. LLOYD (Associate of Council) said the objection was not so much to the principle of the Bill as to its details, and that any objections which it might be desirable to urge, would be best stated in Committee. It seemed to him a desirable thing, at the next Meeting, (presuming that this discussion would be adjourned to another

evening,) to suggest the appointment of a Committee to draw up a petition, accompanied by notes and comments, to the Members of the House of Commons. It was to be observed that the petition of which Mr. RUSHWORTH had spoken, had reference to only one point in the Bill.

Mr. J. FISHER (Visitor) expressed himself at a loss to understand the meaning of the 4th clause of the Local Taxation Bill, as to the rates to be paid on incorporeal hereditaments. He had taken some interest in this question, because a case occurred in his experience which raised a question of great importance, to which this clause might apply, and, if so, he should be glad of it. A railway company were the occupiers of a wharf, the owner of the land being the Marquis of Bute, who received the tolls paid for the use of the wharf, but the railway company were rated for those tolls, as if they received them for their own benefit. Those tolls might rise to any amount, and the taxation would fall upon the occupiers of that which was called an "incorporeal hereditament." If this clause were intended to meet a case of that kind, it would remedy a very great injustice. He thought that there was some misunderstanding as to the clause referring to the rating of mansions. He had very little doubt it would apply to them, and apply with great justice. He had known cases in which the owners of large properties of that kind had asserted that they could not be let. For his own part, he believed that if Windsor Castle were to let, some one would take it. It was argued that a property of this kind ought not to be rated at its value to the owner if he could not let it. If it were vacant, the owner would say he ought not to pay rates for it; but surely it was not right to abate the rates when it was occupied. There were some properties which could neither be let nor sold, because they

were combined with other property, so that their separate value, either for rent or sale, could not be ascertained. There was a case in Cardiganshire in which the owner of a large mansion, which was rated at £100 a year, appealed to the Quarter Sessions against the rating, on the plea that the house could not be let, but the house and stables were occupied and the gardens were kept in cultivation; and yet the occupier wanted the abatement on this ground, and he got it from the Sessions. Anything which would tend to remedy such a state of things ought not to be opposed. Therefore, although he saw things in these Bills which he thought were deserving of criticism, they ought not to be condemned as a whole. A case occurred recently, in which a mansion, on which the owner had expended £40,000 on embellishment, was rated at £700 per annum, and that was objected to and reduced.

He hoped that attention would be given to the clauses relating to exemptions, inasmuch as that subject had, apparently, been overlooked. A Paper had been recently read before the Agricultural Society, in which that question was entirely ignored. He thought it of great importance with regard to land. In the parish of Lidney, there was a local board having to deal with a very small collection of houses, and a very large parish. When the local board was formed, the district embraced the whole of the parish. The farmers had no objection to that, because they were told that they would only have to pay 3*d.* in the pound, on a 1*s.* rate. If it were increased to 1*s.*, it would be a great injustice to them.

In a case which came before the Queen's Bench, upon the question as to the kind of property to which exemptions applied, Justice ERLE expressed himself in these terms:—

“I take the general purpose of the Act to have been to make that property which derives benefit from the operation

of the Act liable to the full rate, and that property which derives but little benefit from it should come under the more limited rate, and should have the benefit of the exemption; and the property which does derive the most benefit is that which is more proximately connected with habitation and the convenience of the inhabitants, the general principle being the making house property liable to the full rate, and land occupied, merely as land exempt from the full rate, and liable only to the minor rate."

That principle had always been acted upon with regard to land.

Mr. E. J. SMITH (Member) remarked that all the objections which had been urged this evening were objections to the details of these Bills, and he thought that all would agree that the chaos now existing in connection with the different assessments to the poor, the highways, &c., should be reduced into some sort of order, and that the only subject for them to discuss was how that should be done. If that were the case, it would be exceedingly inexpedient that they should put themselves in a position of antagonism to the whole principle of the Bills, when, in fact, they only opposed the details. He was only anxious that it should be understood that this Institution did not concur in any view of that kind.

On the motion of Mr. E. RYDE, the discussion was then adjourned till the next Meeting.

AT
THE ORDINARY GENERAL MEETING,

Held on Monday, May 8th, 1871,

RICHARD HALL, PRESIDENT, IN THE CHAIR,

The adjourned discussion on "The Rating and Local Taxation Bills" was resumed by

Mr. EDWARD RYDE (Member), who said that, to attempt to compress within the limits customary at these Meetings the discussion of the present question in its entirety, was a matter of great difficulty. The subject dealt with by the Bills was a vast one, and the alterations which the Government proposed to effect were, if not of a radical character, at any rate, very comprehensive and elaborate. He, therefore, proposed to limit his observations, principally, to those clauses of the Bills which referred to, and made alterations in, the present laws of rating.

At the last Meeting, Mr. RUSHWORTH suggested that, before this discussion closed, some resolution should be passed by the Institution expressive of the views of its Members. He (Mr. RYDE) thought that no single resolution would be sufficient to embody those views with any degree of completeness.

There were two Bills under consideration, and, of course, two sets of clauses, representing several different

topics for discussion. The preambles of the two Bills were so reasonable that he thought it very likely the Institution would approve them; but upon each set of clauses there would, no doubt, be widely divergent opinions.

The petition presented last week by the Society of Auctioneers, condemnatory of the Bills, was, in his opinion, conceived with a little want of consideration; and any petition which this Institution might think fit to present would, he imagined, be rather in favour of the principle of these Bills than otherwise.

With regard to the two Bills, it was obvious that the smaller one would be of no use without the larger. The Local Taxation Bill abolished all exemptions from rating, and proposed to render all Government property liable to the consolidated rate; but the consolidated rate was imposed only by the Rating and Local Government Bill, and he was at a loss to imagine why there should be more than one Bill.

The preamble of the larger Bill recited that—"it is expedient to amend the law relating to rating and local government." All would, he thought, be of opinion that it was expedient to amend the law of rating in so far as it concerned the exemption of Government buildings. The heavy rates in a parish like St. Margaret's, Westminster, for instance, would be lightened by rendering such a building as the Houses of Parliament liable to a portion of the local taxation. He did not understand how the Society of Auctioneers could say that the contemplated measure would tend to depreciate the value of property; for, if the Houses of Parliament were rated, the rating of all other property in the parish would be lightened to the extent of that rating, and the value thereby enhanced and not depreciated.

So far as he could gather the views of the Institution

from the speeches which had been made, they were in favour of the preamble of this Bill.

It was said by Mr. HUSKINSON, at the last Meeting, that he considered the arrangement, for the consolidation of all rates into one rate for each parish, an excellent one, and hailed it with satisfaction. Mr. CADLE, who had enlivened the discussion by telling them that his farm was situated in eight parishes, and that the rate collectors, in making two applications for each rate, would have to make eighty-four journeys in the year, expressed his opinion that the consolidation of the rates, if there were to be rates at all—and that, he supposed, they must accept as a fact—would be much to the advantage of the country. Another gentleman (Mr. FISHER) spoke in favour of the preamble of both Bills, and observed that, although there were things in them which were deserving of criticism, it would not be just to condemn them as a whole. His friend, Mr. E. J. SMITH, also spoke decidedly in favour of the preamble of the Bill, and he (Mr. RYDE) believed that the opinion of the majority of the Institution would be in its favour, but opposed to several of the details. The clauses, however, could be easily amended, and that was the object at which they should aim. He had just been informed that an announcement had that evening been made in the House that the Bills would be withdrawn for the session. Notwithstanding that, he (Mr. RYDE) presumed they would proceed with this discussion, in order that their opinions might be useful when the Bills were brought forward again. The second clause of the Bill, taken in connection with portions of the other Bill, was a little difficult to understand. It provided that the Bill should not apply to Scotland nor Ireland, nor to any parish or place to which “The Valuation (Metropolis) Act, 1869,” extended. That clearly excluded the metropolis. But if clause 12 of the

Local Taxation Bill, were referred to, it would be found it stated that "The term 'consolidated rate' means, *as regards the metropolis*, the poor rate, and any sewers' rate, drainage rate, consolidated rate, and every other rate levied on the rateable value of property within the metropolis." It was, therefore, evidently intended not to exclude the metropolis. This was not a Bill, however, for making valuation lists, after the manner of the Metropolis Act, and some alteration would be necessary in order to make it put the metropolis and the rest of England upon one basis.

He now wanted to call attention to an important feature in the Bill, which provided that every property was to be rated at its full value. There were at present many exceptions to that rule. Agricultural land, to certain rates, was only rated at one-fourth; whereas, under this Bill, it seemed to him that every kind of property was to be rated at its full value; he was not, however, quite sure that the draughtsman who framed this clause intended that to be so. The consolidated rate was not an additional rate. It was simply a new name for a rate; for every rate now levied in any parish was to be paid out of this consolidated rate; and there was nothing in the clauses of this Bill which made it unfair, with regard to the mode in which the precepts were to be made upon the consolidated rate, for the discharge of all other rates.

The consolidated rate was to be paid quarterly, in such instalments and at such periods as the chairman might direct. One new feature about these quarterly payments was, that there was to be a demand note, giving full particulars, served upon every ratepayer before the first instalment became payable, so that every one would receive a notification of all the rates included in the consolidated rate, which he would have to pay during the

year, and which he was required to pay in four quarterly payments. It seemed to him, as far as the making of rates was concerned, that there could be nothing more simple than that arrangement. The chairman of the Parochial Committee was to make this consolidated rate, but the Union Assessment Committee was to continue to make the valuation lists as they were now made. The only difference was this, that when the chairman of the Parochial Board made a consolidated rate, he was to take care that he put in all rateable hereditaments; but when he came to the value, he was to go to the valuation list of the parish, which was to be evidence of the value of the hereditaments; though it was obvious that the draughtsman who drew this Bill was not practically acquainted with the working of the Union Assessment Committee Act. It was stated by Mr. GOSCHEN in the House of Commons, in reply to a member, that the Bill did not contemplate any interference, either with the Assessment Committee, as at present constituted, or with the valuation list. Some slight verbal changes, however, would be necessary to make the two Bills work together.

The next new feature of the Bill to which he would advert, was the power given to the tenant to deduct from his rent half of the rates paid in respect of his occupation—a provision which he considered ridiculous, looking at it from a common sense point of view. It left the incidence of the rate just where it now was; for a tenant, who paid only half taxes, could pay so much more rent, and would be called upon by the landlord to do so. It was thought by some that this clause would interfere with the freedom of contract; but he was not apprehensive of that result. At the former Meeting, a gentleman referred to a case of rating a dock on the Great Western Railway in South Wales, and stated that notwithstanding the tolls were handed over to

the MARQUIS OF BUTE, the owner of the dock, the Company had to pay the rate. He supposed that this clause was intended to provide for cases of that kind, for it enabled the occupier to deduct from his landlord half the rates he paid. Assuming a rent to be £100, and the property to be rated at £100, it enabled the tenant to deduct one-half the rates; but supposing the property to be rated at £100 while the rent was £50, then the tenant could deduct only one-half of half the assessment, because it was assumed in that case that half the rateable value was the property of the tenant and not of the landlord. In the case referred to, he apprehended that so much of the rent as was handed over as tolls would be liable to the deduction. That was the meaning of the clause as he read it.

As reported in page 305, Mr. HEDLEY referred to a case in which property, originally let for £500, rose to a rental value of £3,000, and said that, according to the provisions of the Bill, the lessor would have to pay rates upon half the £3,000=£1,500, while he was receiving only £500. He (Mr. RYDE) did not understand the Bill in that way. If the property were worth £3,000, and the lessor received £500, it was only upon one-sixth of the assessment that he would have to pay half the rates.

He presumed that the exemption set forth in clause 5, section 4, applied to all borough rates as well as consolidated rates; though why a landlord in a borough should not pay half the rates as well as a landlord in a county, it was not easy to see, and the exemption seemed to give support to the opinion entertained by some people, that the Bill was opposed to the landed interest.

It must be borne in mind that existing contracts were not to be interfered with, and that a tenant who had covenanted to pay a particular rate would still have to do so. That

brought him to the end of Part I., the effect of which was to establish this consolidated rate instead of a number of other rates, and give the tenant the opportunity of deducting from the rent, half the rates charged to the landlord,—in fact, in all new contracts it compelled him to do so.

He now passed to the second part of this Bill, which established the parochial boards, and appointed chairmen. It did not seem to contemplate the appointment of men of very elevated position to the office of chairmen, seeing that the qualification was the occupation of property of the rateable value of £40 a year, and it was not even necessary that such occupation should be within the parishes in respect of which they sat as chairmen. That seemed to promise one advantage—it might be the means of substituting men of business for clergymen, who at present filled the office of chairmen at vestry meetings, an arrangement which was often objectionable.

The power of appeal, given in Part VII. of the Bill, against the valuation, amongst other things, was, he should say, a mistake, and would have to be struck out.

Then came the qualifying clause 39, section 10, which, some persons thought, was meant to provide for the assessment, at one-fourth, of arable and pasture lands, market gardens, canals, towing paths, and railways. Those were at present rated at one-fourth only to certain rates. That clause seemed to him to apply, not to the above, but to other limits imposed by Acts of Parliament. Take the highway rate as an illustration. Under the Highways' Act no higher rate than 10*d.* in the pound could be made, and three rates only in a year.

He would briefly express an opinion that the object of the Local Taxation Bill was one which the Members would also vote for. It was—"to make better provision respecting

the liability of property to local taxation, and for transferring the inhabited house duty to the parochial authorities." There would still remain exemptions of churches, chapels, and meeting-houses; but all Government buildings were to be rateable. So far as regarded the rating of mansion houses, it appeared to him that the justice of the case would be met by leaving the present law alone, which was ample for every purpose, rating the property, as it did, at the rental for which it might be expected to let. Regard should be had to what a tenant, owning and occupying the house, might be reasonably expected to pay for that house if it belonged to someone else. Though this might be difficult, it would be much more so to carry out the provision of this Bill. What was the saleable value of a house? Take the case of a house with 40 acres of land, sold for £11,000. How much did the land sell for, and how much the house? What was the value of the land without the house, and of the house without the land? Mr. HEDLEY correctly said that blast furnaces might be rated at 7 per cent., railway buildings at 5 per cent., and mansions at $3\frac{3}{4}$ per cent. After all, what was that method itself but bringing common sense and judgment to bear on the question?

He thought Mr. HUSKINSON dwelt rather too much upon the rating of timber. It was the land on which the timber grew which was rated. If the statute of Elizabeth were to be repealed, this Bill gave the power of rating timber land, in the same way as underwood or other land, without a special clause being necessary, defining the way in which it was to be rated, as if it were arable, meadow, or pasture land. Now there was a great deal of land, as was well known, planted with wood because it was not worth cultivation as arable or pasture. Land might be worth 5s. or 7s. 6d. an acre for underwood that would not be worth so

much as arable or meadow. That there was a good deal of land under-rated there could be no doubt, but the present law was sufficient, if properly carried out.

Mr. JOHN OAKLEY (Member) regretted that the auctioneers had denounced these Bills *in toto*, because he felt that there were points in them which promised to be generally useful. He thought that all property should be rated, except charitable institutions—a provision in the Bill which all would admit to be correct. He was not disposed to demur to the proposed consolidation of the different rates, but with some of the other details he disagreed, especially with the way in which the votes were to be taken, which would result, as had been pointed out, in the swamping of the owners by the small occupiers. He thought the proposal that owners should pay half the rates, a ridiculous subject of legislation. Property at the present time, in reality, paid all the rates, and would always do so, therefore any change of the contemplated kind would simply be taking money out of one pocket and putting it into the other. The next point he would refer to was one which more nearly concerned them as surveyors, viz., the attempt to change the present mode of rating buildings, woodlands, and timber. According to the Bill, woodlands were to be rated hereafter as arable and meadow land, but he did not gather that it was to be on the same assessment as the arable and meadow land adjoining those woodlands. He had passed that day through some woodland, in the mid-land counties, which was planted entirely for the benefit and pleasure of the occupier, who kept it as woodland. If it were suitable, and were converted into arable or pasture land, no doubt it would let at something like the rent of the adjoining land. He thought, however, that if this Bill

passed into law there ought to be some allowance made for the expenses of the conversion. There were banks which they could not plough, and lands which they could use in no other way than for growing timber, and it seemed to him scarcely fair that land of the kind should be rated at what the adjoining fields were worth. If it were done, in some cases, land now rated at 2s. 6d. per acre would be rated at £3 to £5 per acre. In his judgment, the law in this respect had better be left where it was. The reasonable rent at which property might be expected to let was the sum at which it ought to be rated. However, they were met, not so much to discuss the details, as the principle of the Bills. It was left to the chairman of the parochial board to determine what properties were to be valued under clause 6, but he (Mr. OAKLEY) did not think that any surveyor could value them in the way laid down in that clause. The calculation must ultimately come back to the rent at which the property could reasonably be expected to let, whether it belonged to the occupier or to anybody else. With respect to estimating the selling value of a house, Mr. RYDE had pointed out the difficulty of separating the proportion of value which appertained to the house alone, from the value of the surrounding park or pleasure grounds in which it stood. For these and other reasons, he felt that the attempt to alter the law of rating should be objected to, on principle, by everyone present. The preamble of the Bills—that it was right to rate all property, was, he thought, proved; but he considered it wrong, and, in fact, impossible, to define how these different properties should be dealt with equitably, by any clause in an Act of Parliament which would fit itself to all properties so well as that upon which all parties were now bound to proceed.

Mr. F. J. BRAMWELL (Associate of Council) said the few words he had to say would be confined to the two clauses which had been the principle topic of discussion. The first was the clause in the smaller Bill relating to the rating of woodland, a clause which disclosed a vicious principle at the bottom of it, viz., that a man was to be rated, not according to what he made out of his land, but according to what he might make, if, regardless of the beauties of the scenery, and his own and his neighbours' comfort, he converted his property into a bread and beef factory. It must be remembered that the land was wanted as a place to live in as well as for the purposes of obtaining food. The clause, in effect, taxed a man for indulging in a luxury, and for daring to use his own land for less advantageous purposes than someone else thought he could use it for. Such an interference struck at the root of that control over property, which the owner had a right to exercise. He thought also that the clause referring to the rating of buildings meant, really, very much the same thing. The statement, in effect, was this,—“We have a difficulty in ascertaining what a certain building would let for, therefore you are to ascertain what it would sell for in its actual state, and existing mode of occupation, and by putting 4 per cent. upon that the annual value will be arrived at. In his opinion, however, it meant more than that; it meant—“If you choose to occupy No. 12, Great George Street, as an Institution, for which you are rated to a certain amount, and if it can be shown that as two cheesemongers' shops it would bring a higher rent, and therefore, that it would pay someone to buy the premises in their existing use and occupation for a large sum,—not to keep them in this use and occupation, but to convert them into two shops,—you shall be fined for being an Institution of Surveyors to the extent

of the difference between the actual rent and the assumed rental value." The two clauses struck him, as they had struck others, as unduly interfering with that discretion which every man had a right to exercise over his own property.

Mr. J. H. LLOYD (Associate of Council) said that he rose as the devil's advocate. The Bill was not so unreasonable as Mr. BRAMWELL sought by his humorous observations to make it appear to be. He apprehended the meaning of the clause relating to timber to be this:—"Certain noblemen and gentlemen choose to occupy land for their own luxury and enjoyment in a way that is not the most productive. They want covers for pheasants, and covers for foxes, and they choose to occupy a portion of their land for these purposes, rendering it practically unproductive, but deriving from it a certain amount of personal enjoyment; and if it were rated according to its productive value in that condition, the amount it would contribute towards the rates would be very little." If they chose to keep the land in that state for their own luxury or selfish enjoyment, there was no reason in the world why it should not be urged that if it were applied to ordinary uses it would be worth more, and, therefore, should not be exempted from the ordinary value. These ideas might, reasonably, have been in the minds of the persons who framed the clause. He was not there to say that they should adopt it; but it was fair to hear both sides of the question.

He thought that the clause providing for the rating of property not immediately reducible to rateable value, had not so much reference to mansions as to institutions, hospitals, union buildings, and other structures of that class, which it was proposed should in future bear their fair share of the

rates. It was impossible to put a rental value upon those buildings. How, then, were they to be assessed? Somebody must cut the knot, as it could not be untied. It was, therefore, proposed that the chairman of the parochial board was to consider and ascertain what the building was worth, looking to the amount of land which it covered, and which must be worth something *per se*. As it was impossible to put a rental value upon it, what was it to be assessed upon? There was the notable case of St. Thomas's Hospital, which was taken by a railway company. To say what was its rental value was impossible. It was necessary, therefore, to proceed by an inquiry as to the amount of ground which the building covered, and the value of the building covering that ground. That would be the gross saleable value, and would afford some means of estimating its value. Having arrived at that result, it was suggested, in order to facilitate the establishment of the rating value, that it should be taken as 4 per cent. upon the sum so estimated. It was fair, he thought, to consider that there were exceptional cases which might have justified those who framed the Bill in introducing a clause of the kind, and he was not prepared to say that it would be wise or fair to throw it over as absurd and foolish, without due consideration. He used these instances to show how very different were the aspects which the question bore when viewed from different sides. He, therefore, asked for a suspension of judgment, and that the Institution should deal with these two Bills as a whole, suggesting what were thought to be reasonable modifications and amendments.

MR. ARUNDEL ROGERS (Associate) said it appeared to him objectionable in principle, to assess property for the purposes of rating otherwise than according to the principle at

present adopted, viz., the amount for which it was let, or might be assumed to let. He did not think they were met to discuss details, but principles. The two clauses which he thought objectionable, on principle, were these—first, the proposal to transfer the house tax to the local authorities. The object of that transfer was to afford an excuse for enlarging the general taxation of the country. It was an indirect way of saying, “You do not pay enough taxes; we will take off this £1,200,000 house duty from the general taxation, and apply it to local taxation, and thus have an excuse for asking you to pay an additional taxation of £1,200,000 a year.” The second clause to which he objected was the one empowering the tenant to deduct half the rates from his rent. Such an arrangement went to the root of the respective rights of the landlord and tenant; and, whether the landlord put on an additional rental or not, it was clear it would end in landlord and tenant adjusting their differences in an objectionable way. The relations of landlord and tenant would be rendered antagonistic, and the equilibrium of rent and value, existing at the present time, would be disturbed, without a corresponding advantage.

Mr. D. WATNEY (Member) said that, having carefully read the clause relating to the rateable value of buildings, it occurred to him that it only referred to such buildings as were unusually large, and from their size or structure were only adapted to special purposes, and therefore could not be rated in the ordinary way. It applied to dockyards, factories, and buildings, on which it was impossible to fix an annual rental value. He did not think it was intended to apply to mansions, which, apart from any land attached to them, would only realize their value as old materials. Clause 7, relating to the rateable value of woodland, did not apply to

the timber, but to the land on which the timber was grown. The banks spoken of by a gentleman this evening would not, as land, be worth 2s. 6d. an acre ; but, for the purposes of growing beech and fir timber, they would be worth considerably more to the owner of the property. He considered, therefore, that the clause was as fair and equitable to the landlord as it could be, although it might press hardly on some few people. He regarded the exemption of timber as wrong in principle. In many cases, almost entire parishes were occupied by Crown woodlands. They employed a great number of labourers, and contributed largely to pauperism, but nothing to the rates, and it was well known that land, as woodland, employed more labourers than when under cultivation.

The great point overlooked in this Bill, and the difficulty which should have been grappled with, was the taxation of incomes from funded property. That was the point to which attention should have been directed, so that an equalization of taxation on incomes from all sources might be attained.

The most objectionable feature of the Bill was the confusion which it would create between the owners of property and their tenants. It was true that all existing contracts, up to the time of the passing of the Bill, were to be binding, but after that, the liability of owners to the payment of half the consolidated rates would lead to great complications, since the deduction would be of unequal amounts in different parishes. He considered that, under the Bill, great injustice would be inflicted on the owners and mortgagees of building land. At present, ground rents were of such value that they ranked next to consols. The owners of ground rents on building land knew that they were subject only to deduction on account of income tax, but under the proposed arrangement

they would be liable to a fluctuating tax. Owners of property letting land on lease would be compelled, in fixing their ground rents, to take, as nearly as they could estimate it, the average of the consolidated rate, and fix the ground rent accordingly. A rate of 5*s.* in the pound would, probably, be the average annual amount of the consolidated rate; but under exceptional circumstances, the rate of a union or parish might be raised to 7*s.* 6*d.* in the pound. He said that this would seriously affect the intrinsic value of ground rents as a fixed security—a circumstance, to his mind, of much importance.

Mr. A. O. SEDGWICK (Member) said that the clause which most attracted his attention was that relating to the rating of woodlands. He had the management of several well-wooded estates, and he could not see how this Bill could be anything but unfair to the owners of such property. There was a case of woodland within his experience, where the underwood fetched from £20 to £30 per acre; another where it ranged from £5 to £10, or £15; and a third (a wood of 300 acres) where no underwood was grown at all. The quality of these lands was the same, being of an agricultural value of £1 per acre. In one case, a larch plantation after a growth of ten years was thinned out by cutting down every other tree, thus producing a return at the rate of £40 per acre; the agricultural value being 10*s.* per acre. In another case, after the same number of years' growth, the fall of underwood did not produce more than £3 or £4 per acre, while the value of the land adjoining was £3 per acre, including the game. How would the section operate in such cases as those? He conceived that the only fair way of rating woodland was at the price which a tenant would be willing to pay for it, including the game.

Where the life interest in an estate had to be sold, would it not be a hardship upon the person who bought that life interest to be called upon to pay—say upon an estate of 3,000 acres—£120 a year in respect of the rating of the woodland on that estate?

He did not agree with Mr. RYDE that, where the rates were divided, the settlement between landlord and tenant would be simple. He thought it would raise questions between landlord and tenant which it was not always pleasant to open. If Government wished to interfere with contracts they ought to lay down some rule to be followed. He believed it was proposed, in the course of a debate in the House last year, that the half of the rate should be taken on the average of the five previous years and added to the rent. His (Mr. SEDGWICK's) own rates came to about £80 a year; he had no wish that his landlord should pay £40; but if the rate were taken on an average of the five previous years, and a moiety added to the rent, he saw no objection.

Mr. W. EVE (Member) said that he was not aware that the suggestion had been made of commuting the rates upon an average of previous years. That, he thought, would meet the case. If half rates were to be paid by the landlord, in new agreements some principle of that kind should be established, or great confusion would be created. No gentleman had alluded to the fact that the principle of landlords paying a portion of the rates had been established in Ireland, and worked well, for the reason that Mr. HUSKINSON assigned in his remarks at the last meeting, viz., that it combined the elements of ownership with that of occupier; whereas, under the present system, the tenant was glad to limit his expenditure to the smallest amount, in consequence of his

interest being a limited one. That applied more particularly to sanitary matters. It was found in the country that tenants having a limited interest, were reluctant to carry out sanitary improvements on a firm and lasting basis. He thought, for that reason alone, that this change would be desirable. He was of opinion that there should be a clause in this Bill, to enable landlords whose property was let on lease, to have their rates commuted on the average of the five or seven previous years, in order to bring themselves into the position of landlords making new agreements, or they would not have the like privileges of voting on the various occasions. With regard to the rating of special buildings, under the 6th clause, he thought the gentleman on his left had spoken under a misapprehension. All rateable property was rated, whether occupied or not, and when the collector went round was the proper time to ascertain whether the rates were to be paid or not, and for what proportion of the period they were to be paid.

With regard to timber, he was sorry to say he was opposed to the opinions expressed by most of the speakers. There was, no doubt, great difficulty as to how they should rate timber, and, therefore, this clause appeared to him to meet it. It was not to be rated as some gentleman said, at the same value as the adjoining land, but at the value of *such* land, if occupied as pasture or arable. If it were hilly land, which could not be ploughed, they could not rate that at £1 per acre, because other land adjoining was worth £1. If it were only worth 5s. an acre *per se*, it would not be rated at more. The land of this country was limited, and it was a question whether noblemen and gentlemen occupying land for timber, whether for ornamental purposes or not, should be exempted from taxation. He would let them do what they liked with their land, but he would make them pay a

fair contribution to the rates, according to the value of the land if devoted to agricultural purposes.

Mr. A. GARRARD (Associate) expressed his opinion that in the case of ground rents, mentioned by Mr. WATNEY, under the provisions of this Bill, the saleable value of small rents would be further depreciated by reason of the extra trouble to those who had the management of this class of property, as the difficulty of collection would be greatly increased. He thought they ought to set their faces against this clause of the Bill, as he saw it would create much difficulty without any corresponding good being likely to result from it.

Mr. FISHER (Visitor) apprehended that ground rents would not be rated separately from the property from which the ground rents were derived. If a man built houses, the houses were rated; the tax-collector knew nothing about the ground rents. That was entirely a matter between landlord and tenant, and was an interior bargain. The ground landlord would not appear in the rate book as the occupier of the ground rents. The rateable property consisted in the houses in combination with the ground on which they might stand. If the ground landlord were liable for half the rates on his ground rent, it would only be a division between him and the lessor, of the moiety.

Mr. E. J. CASTLE (Associate) said, with reference to ground rents, that supposing the ground rent to be £6, and the rack rent £100, the owner of the ground rent had not to pay half the tax, but only six-hundredths of the half. It was only upon the proportion which the ground rent bore to the rack rent.

The PRESIDENT said that, inasmuch as the Bills were withdrawn for this session, it was not worth while to go into details. The matter would be kept before the attention of the Council, and, if necessary, a committee would be formed to consider the clauses, and make a report with regard to them.

The Meeting then adjourned.

LONDON :
ITS
COMMERCIAL CENTRES,
AND THEIR
INFLUENCE ON THE VALUE OF LAND.

BY EDWARD T'ANSON, MEMBER.

*Read at the Ordinary General Meeting of the INSTITUTION OF SURVEYORS,
May 22nd, 1871.*

RICHARD HALL, PRESIDENT, IN THE CHAIR.

I CANNOT hope to bring under your notice any observations in reference to London, considered from a surveyor's point of view, which will be new to many of my professional brethren ; but I have endeavoured to put together such observations as, arising out of my vocation and of a life-long residence in the City of London, may give us sufficient matter for an evening's talk, and, perhaps, suggest some topics for consideration.

When I first knew London we had just passed through the long and costly wars in which we had engaged, in consequence of the political policy pursued by the nation under the guidance of PITT as Prime Minister, in opposition to the great power and genius of the First Napoleon. One of the earliest impressions upon my mind was the illumination which took place in London in 1815, in commemoration of the peace which shortly followed upon the battle of Waterloo and the signing of the treaty of Vienna,—a

treaty which we have lived to see so much shattered and torn.

What was London in those days?

Many of its salient features will be remembered by some among you. It was a time when London had but three bridges. Until about forty years previously,—namely, in 1769,—it had but two bridges, London Bridge and Westminster Bridge. London Bridge was very narrow, and was approached on the Middlesex side by a steep hill, and with a narrow street as its continuation on the southern side of the river. GEORGE DANCE and Sir ROBERT TAYLOR had done all that could then be done to improve the old bridge, and had swept away the shops which, up to 1754, stood upon it, together with the gateways at both ends, upon which the heads of traitors were wont to be struck up; but, in my early days, two or more of the northern arches were still blocked with water-wheels, which worked pumping machinery for the supply of water to the citizens' houses.

South London was then difficult of access; and equally difficult for the traveller from the southern counties was the passage over London Bridge to the City. Until very recently, the Borough High Street, particularly the eastern side, was occupied by inns, having entrances by narrow gateways from the street, with large open internal courtyards, where the country waggons and coaches stood, with stabling for horses on the ground floor, and bed rooms above, to which access was obtained by an open balustraded gallery. These inns were highly picturesque; some of them, as the George Inn, still remain, although in a fragmentary state, but most of them have been demolished; Chaucer's "Tabard" having been removed within the last few years. In my early days these inns were numerous in other parts of London, but they are now becoming rare; one or two yet

remain in the City, on the north side of Bishopsgate Street, and there is still a very good example in Warwick Lane, Newgate Street, now occupied by a carrier. The distinctive features of these inns are quite oriental, and remind me of the khan or caravanserai in which I lodged, years ago, at Bucharest in Wallachia, almost on the limit of European civilisation. Beyond St. George's Church, in the Borough, was the open country; the Elephant and Castle stood in the fields with the almshouses of the Fishmongers' Company opposite to it, and further away were the villages of Camberwell and Clapham.

But the more frequented, because the more accessible, suburban villages of that time were those to the east and north-east of London,—Bethnal Green, Islington, Stoke Newington, Hackney, Highgate, Enfield, Bow, and Walthamstow. In these localities may still be seen the fine red brick houses of the time of Queen Anne and the first Georges; these were the country residences of the City merchants, who, until they migrated westward,—first to Bloomsbury, then to Bedford and then to Russell Square,—used to live in the narrow lanes of the City, such as Botolph Lane, Mark Lane, and Mincing Lane.

Within my recollection, the merchants residing in the City, used to remove their families from summer to winter quarters, in the family coach, between their country houses at Walthamstow or Hackney and their town residences and warehouses in the City.

One of the finest of these old City mansions which is now being—not quite destroyed but—converted, will serve as a specimen of the rest. This is a house in Mark Lane, belonging to the Baring family, and which, although long disused as a residence, has existed until this day, with all its essential features unchanged. With its carved oaken portal, its marble-paved hall, its balustraded staircase and

panelled walls, its garden, with a fountain in the centre, and its fig trees which, until a few days since, still remained, it is a perfect type of the residence of a merchant of the last century. All these interesting features, however, will soon be entirely obliterated, and the house and garden converted into strictly business offices.

I may incidentally mention some of these buildings, belonging to the seventeenth and eighteenth century, which still remain in the City, although they have all been more or less altered; of these, a house in Sherborne Lane, King William Street, is, perhaps, the best preserved, and a group of houses on Laurence Pountney Hill, with the date 1703 carved on the door. In Great Tower Street (No. 33), near Water Lane, is the house formerly belonging to Alderman BECKFORD; it is in good preservation, and is now let out as offices.

These relics of the past cannot be expected to endure much longer, and when we consider (as I propose to do in the course of this Paper) the changes that have taken place in the commercial character of London, and the social condition of its inhabitants, it is apparent that, setting aside the inevitable decay of all builders' work, the structures of Charles the Second's time, which remained substantially unaltered since the Fire of London, and the period to which I refer, are wholly unsuited to the requirements of the present time, and must, within a comparatively short period, be all swept away; and herein I see matter of congratulation for ourselves, as well as the coming generation, by whom the rebuilding of the City of London must be carried out.

At the time to which I would recall your attention, namely, the early part of the second decade of the present century, the Londoner who wandered out for a constitutional walk, could, on the elevated plateau of Tower Hill, overlook the Essex Marshes and the distant towers of Greenwich

Hospital, and with a favourable breeze, could smell the sweet scent of the Essex hay.

If he needed a farther extension of his peregrinations, and a sniff of the sea air, there were the Margate hoys, the journey in which, however little we might now appreciate it, could be fondly described by CHARLES LAMB; and in those days, the green fields which lined the river bank were plentifully graced with the dangling skeletons of pirates, hung in chains, as a warning to the mariners who navigated the Thames.

The River Thames was then—when Cheapside and the Roman road of Watling Street were the principal highways from east to west London—a great means of communication. When five hundred men plied their trade as watermen at Old Swan Stairs, by London Bridge, the Thames wherry was a frequent and certainly the most pleasant mode of conveyance from one end of London to the other, and was universally patronized by the citizens, their wives and daughters. Lovers would

O'er Thamis row the ribboned fair.

Old Swan Stairs, and the stairs at Palace Yard, Westminster, were the most important points of embarkation. Hungerford Stairs, on the site of the Charing Cross Railway Station, have long since disappeared; Queenhithe stairs remain, but are no longer used.

The Water Gate at the end of Buckingham Street, in the Strand, erected by GEORGE VILLIERS, the first Duke of Buckingham, for access to his mansion, York House, in the Strand, yet remains; but it is now sunk below the level of the adjoining ground, at the back of, perhaps, London's greatest work, the Thames Embankment. This gate, erroneously attributed to INIGO JONES, was designed and built by NICHOLAS STONE, Senr., master mason to King James I., and King Charles. River stairs were, indeed, numerous, and

places of considerable importance. The present great western portions of London—Tyburnia and Belgravia—were unformed, Kensington was a distant suburb reached only by two-horse coaches, which, not more frequently than one an hour, used to ply from the Royal Exchange; omnibuses were quite unknown, so also were cabs, and the worn-out carriages of the gentry, drawn by the wretchedest of horses over the pebble-paved streets, were the only hackney-carriages then existent. London was without any regular day police, and the night watchmen were old and inefficient. The heaths and open commons near London were notoriously unsafe at night. Gas lighting was unknown.

London, in those days, had seven or eight principal markets—Billingsgate for fish, Leadenhall for poultry, Covent Garden for fruit and vegetables, besides two hay markets, one being held in the present Haymarket and the other at Whitechapel. It possessed also the great cattle market of Smithfield, and the markets of Farringdon, Hungerford, Carnaby, and Spitalfields.

At that period, markets were more frequented by retail purchasers than at the present time. Citizens' wives, even of the upper classes, used to attend the markets to ascertain whether provisions were scarce or plentiful, and in consequence dear or cheap, and they regulated their purchases accordingly, as is still done in country towns in England, and in most continental towns; they bought their goods on the spot, and their purchases were carried to their houses by their own servants.

Billingsgate was, as now, the chief fish market.

Then there was Hungerford,—also close to the river-side,—which had some small supply of fish, but it never rivalled Billingsgate; and the effort to make it a great centre for the population of the western part of London by the erection of the new market there, in 1831, by Mr.

FOWLER, the architect of Covent Garden Market, was a conspicuous failure. The market, which did exist there, was improved into a perfect collapse, and the market and the noble building raised by Mr. FOWLER to accommodate it, are now swept away, their site being occupied by Mr. HAWKSHAW'S colossal western terminus of the Charing Cross Railway.

This is one instance, among others, of the difficulty of establishing or removing markets which locate themselves, apparently in defiance of municipal regulations, precisely where they are found most convenient to the population in the immediate neighbourhood.

Farringdon Market is an illustration in point. The special value of the position is not now very apparent: the approaches are limited and extremely inconvenient, from the nature of the ground, on the slope of the valley of the Fleet river; but it was placed in the nearest possible contiguity to the old Fleet Market, formerly a flourishing market, held in the middle of what is now Farringdon Road, and for the removal of which obstruction the new market was built.

The original market, created near the large population inhabiting the streets running down into the Fleet Valley, Saffron Hill, Leather Lane, the northern side of Holborn, and the precinct of the Temple, drew its supplies from the numerous market gardens, formed in the rich alluvial soil on the south side of the Thames, and, until its improvement, enjoyed a prosperous career; but the well-intentioned efforts of the municipal authorities remain to this day as a monument to attest the difficulty and risk that attend the attempted removal of a market. The present structure, which is now almost deserted, was built by MONTAGUE, the then City Surveyor, and was doubtless inspired by a recollection of what our civic authorities saw on visiting Paris after the peace of 1815,—Farringdon Market being an almost

exact copy of the *Marché des Innocents*, and other fine Parisian markets erected about the same epoch.

A similar result attended a very well-devised scheme set on foot by, I believe, Mr. RIGBY WASON, in the year 1835, for the removal of the Beast Market from Smithfield to the Lower Road, Islington, near Ball's Pond. An extensive plot of land was purchased, and considerable sums were expended in building cattle layers, laying out the market, providing water supply, &c.; but the scheme met with determined opposition, and resulted in great loss to the promoters. The land remained unoccupied for several years, but has been lately let for building, and is now occupied by Packington Street—a large thoroughfare from the Lower Road to the City Road, and the adjacent streets.

A more recent example is furnished by the King's Cross Market, which was established about three years or so since, on a plot of ground near the Pancras Road. It was, however, unsuccessful from the first, and the lease was sold in the latter part of last year to Messrs. ELEY & SON, cartridge makers, for £19,700, for building purposes.

Columbia Market, Bethnal Green, (erected by the munificence of Miss BURDETT COURTIS), after having failed as a general market, has been recently converted into a wholesale fish market, with what success I am unable to say; but I suspect, from the little information that reaches the public, that its success has not been of a marked character.

Such, in a somewhat desultory way, are the recollections of the London of fifty years ago, with some passing reflections suggested by the topics on which I have touched.

Shortly after the close of the war with Napoleon, London contained a population of 1,378,947. It extended from east to west, from Stepney to Hyde Park, $5\frac{1}{2}$ miles; and from north to south, about 2 miles; containing an area of about 11 square miles.

London, we are told, will be shown by the census recently taken, to contain a population of 4,000,000; and by the map published with the last Post Office Directory it extends 10 miles from east to west, from Poplar to Notting Hill; and about 6 miles from north to south, from Holloway to Camberwell, containing an area of 60 square miles; so that it has increased its area certainly five-fold at least.

I have sketched the London of my early days; London as it is at present, it is unnecessary I should attempt to describe; but I now desire to call your attention to the distribution of business in London, and some of the reasons for such distribution.

London may be roughly divided into three districts or divisions.

1st. The Commercial and Industrial District.

This extends from and, indeed, includes the Isle of Dogs on the east, and is bounded on the west by the line of the Old Fleet River or Ditch, which rising in the high lands of Hampstead, and fed by many smaller tributaries, enters the City near the Farringdon Street Station, and runs along under Farringdon Street. This district is full 4 miles long from east to west, and about 5 miles wide from north to south. It includes on the south side of the river all that is London, almost to the base of the Surrey Hills.

2nd. Westward, beyond the valley of the Fleet, is the legal district, inhabited by lawyers, barristers, law stationers, &c., and comprising the sites of the Equity Courts and the Inns of Court. The lawyers occupy a notable space, extending from the river in a parallelogram, stretching northward from the Thames Embankment for a distance of nearly three-fourths of a mile, and from east to west about two-thirds of a mile.

3rd. All beyond this, both on the north and west sides, with the exception of the legal district on the north of Holborn,

is residential property, with such manufacturing industries as are necessitated by the requirements of all great populations, such as tailors, milliners, and the numerous other craftsmen, without whose ministrations no great city could exist.

In olden times, as in our own day, the first element of prosperity in every town is its convenience of access. Great cities have always had their rise in localities where this facility exists, or formerly existed. The sea coast is not, as a rule, favourable for the planting of a metropolis, on account of the difficulties and expenses attending the creation of harbours ; such an exposed position also rendering it liable to attack ; but the estuaries of great rivers, where the river banks form natural landing places, and where hostile invasion may be more easily prevented, are usually selected for the purpose.

London, no doubt, grew out of the fitness of its position in this respect. No vessel of any magnitude could have passed above London Bridge, and between that point and the Tower—built by the Normans for the protection of such commerce as London then had, as well as to defend the capital itself—was the port of London.

The port of London was the centre of the London trade, and until our trade with the Indies developed, and whilst our commerce was confined to the great Flemish towns, and the towns of the Hanseatic League, it was the centre of the trade of the empire.

It is, therefore, in this locality that we must look for the greatest manifestations of commercial activity—in the district adjoining the Tower to the westward, with its deep and wide ditch, the outlet of which, towards the Thames, was through the Traitors' Gate.

That gate, mis-named, through which before
Went Sidney, Russell, Raleigh, Cranmer, More.

Under this gate have passed so many eminent State

prisoners ; and the ditch has only been drained within the last quarter of a century.

The Custom House—until about the year 1810 a range of low wooden buildings, begun by Mr. LAING as architect, and finished in 1826 by Sir ROBERT SMIRKE (who has only recently passed away from us)—was built by the uncle of the present Sir S. MORTON PETO.

Next comes Billingsgate, the fish market of London. Important as this market is to us now, relatively, its importance, however, can be but small as compared with its importance previous to the Reformation, when the tenets of the Roman Catholic Church compelled a constant recourse to fish diet.

Billingsgate, still the greatest fish market, was then exclusively supplied by means of water carriage—no other mode of conveyance could possibly be at once so cheap and expeditious. The market, situated just below the dangerous barrier of Old London Bridge, on the north bank of the river, was the fittest place that could have been chosen for the purpose, and presented, formerly, a very animated scene—the river thronged with fishing smacks bringing in their cargoes, chiefly from the river estuary and the coast of the eastern counties. Here, too, were always to be seen, moored in the stream, solid picturesque fishing boats from Holland, bringing eels from the Dutch lakes.

Around Billingsgate were grouped all the fish dealers' shops, and in a smaller area eastward of the Custom House, and extending a little northward up one of the narrowest lanes in London, the fish trade is still carried on, and millions of crustacea and molluses are here converted, by the painful process of boiling, into edible food.

Then comes the intervening space between Billingsgate and London Bridge ; here the greater part of the wharfingers' business was carried on. The wharves and quays

on this spot have long been by far the most valuable in London. They enjoyed, up to the year 1802 (when the West India Docks were opened), special privileges as legal quays, that is to say, as the only quays where goods could be legally kept in bond; and amongst the first important compensation cases I can recollect, were the cases to settle the amount of compensation to be paid to the proprietors of the legal quays when the London Docks were first opened.

By an Act of the 13th & 14th Charles II. c. 2, the legal quays were, for the more ready collection of custom dues, assigned by Commissioners as the only places where goods could be landed or embarked. These quays were twenty-one in number, and exact bounds were set forth for each of them, and, until the commencement of the present century, no merchandize could be shipped or unloaded except at these quays and certain other wharves licensed by the Commissioners for warehousing goods intended for export, and called sufferance wharves.

The interests vested in these privileged wharves continued to retain their monopoly and localization of trade until the year 1799, when, after a severe contest in Parliament, powers were obtained to establish the West India Docks, and for the formation of a canal across the Isle of Dogs. The West India Docks were commenced in 1800, and opened in August 1802. Next followed the London Docks (1801-5), constructed by Mr. DANIEL ALEXANDER, with whom my late father was, for a time, in partnership. The success of these docks led to others being built. The East India Docks were opened in 1803, and these were followed by the Commercial Docks at Rotherhithe, constructed in 1810, and the St. Katherine Docks in 1823, of which TELFORD was the engineer, and PHILIP HARDWICK (recently deceased) the architect; and lastly, by the Victoria and Milwall Docks.

The space where the wharfing and warehousing business of London was carried on, determined the position of the chief commercial centres of London. Nearest to the mouth of the river is, first, as before mentioned, the fish trade; next comes the fruit trade, dealing in the fruits of Spain and France—oranges, nuts, raisins, &c. This trade located itself partly in Lower Thames Street, and partly in Botolph Lane, Pudding Lane, Eastcheap, and some of the adjoining lanes, where it still flourishes.

At these wharves was also landed such small colonial produce as came to the port of London. The colonial trade—at its commencement, of much less importance than the others I have referred to—had its market a little further removed from the river bank. It located itself in a part of Tower Street, and in one or two of the streets leading out of Tower Street, to the northward, notably in Mincing Lane, where it remains to this day. The colonial market has, since then, grown, and still continues to increase, and is now one of the most important trade centres of London. Most of the colonial produce, (not only for home consumption, but also for export to the continent,) including tea, coffee, sugar, indigo, cochineal, dyewoods, is sold in the crowded rooms, known as the Commercial Sale Rooms, Mincing Lane, erected in 1815-16, by Mr. JOSEPH WOODS. I have, myself, since largely added to them; but they are now quite inadequate to the requirements of the great trade carried on there.

The coal trade has its market in the immediate neighbourhood, and that for an obvious reason; for, prior to the introduction of railways, the port of London was the only place where coal ships could find anchorage. The coal brokers were therefore lodged here, their market being towards the eastern end of Lower Thames Street. They needed no warehouses for the stowage of their goods,

as the coals were delivered out of the colliers, with which the Thames was often covered,—and which, in fact, formed their floating warehouses,—into the characteristic Thames coal barges, and were carried for distribution to the various wharves above bridge, chiefly on the south side of the river, where waterside property has always been of less value than on the northern and more populous shore.

In the same locality, and as close as possible to the sufferance wharves, was and still is the market for the wine trade. Mark Lane continues to be the centre of this commerce, which is a little to the eastward of the colonial market. The wine merchants and brokers have no special market building or exchange, but their offices are all closely clustered together; and, although their wares no longer come to the legal quays, the position of the market is, from the proximity of the Docks and Custom House, as well as of the monetary centre of London, as convenient a place as could be chosen for their business.

Next, I may mention the corn trade. This has its centre and market in Mark Lane. The building, originally erected at the latter part of the last century, contained a small open market, somewhat similar to the Royal Exchange, and to the prototype of both, the Exchange of Antwerp; but this old exchange, although it has been greatly added to,—in which, also, I have had some part,—and supplemented by an additional market, built at its side in 1827-8, by Mr. GEO. SMITH, is still very inadequate to the requirements of this great trade.

The staple article of the corn trade is so bulky as to require considerably more space for warehousing it than could be afforded by the legal quays, and I am not aware that it was ever extensively warehoused there. The warehouses below bridge, on the southern bank of the

river, at Rotherhithe, were and still are the great storehouses of grain for London. These warehouses formerly extended further up the river; but the growing increase of the metropolis, and the consequently enhanced value of land, has gradually pushed them more and more to the eastward, although, just above London Bridge, there still remain some notable exceptions.

Here, then, within a limited space, and growing out of their proximity to the *Port of London* (which words I use in the more restricted sense of what is really in the City, the legal port of London extending as far as the North Foreland), are the centres of the chief mercantile businesses of London, viz. :—

The Fish Trade
 The Fruit Trade
 The Coal Trade
 The Corn Trade
 The Wine Trade,

and what is by far the most extensive and important of all,
 The Colonial Trade.

So far for these great commercial centres.

But there are other businesses of more or less importance, all of which have their special localities on the north side of the river. Of these, the Money Trade is at once one of the most considerable, and I will devote a short space to the consideration of the origin and growth of this business. The bankers of the middle ages were the goldsmiths, who then, as now, occupied the principal centres of commerce. In the closest proximity to these great centres of commerce, which I have alluded to, were clustered the merchants' residences and warehouses, and they formed one great nucleus, where all the various interests could be dealt with, and the *locale* of this nucleus was the Royal Exchange. Here it was that, at a certain hour after the mid-day repast, all the

London merchants congregated, and here they met the goldsmiths, who found customers for the employment of their own or their clients' capital, whether for home trade or for the use of Foreign governments.

The streets where the various branches of the money market were and still are carried on, are ranged in the immediate vicinity of the Royal Exchange. Lombard Street is the centre of the money market, which extended into Change Alley, and even further eastward towards the more purely commercial markets, to Fenchurch Street. There were other bankers in Fleet Street and the Strand, near what had been the residences of the old nobility, the seats of the Dukes of Norfolk, Essex, and others: but the great monetary centre was the Royal Exchange. Here, too, is the Bank of England and the Stock Exchange, both of which have been materially extended within the period of which I am now speaking.

The Stock Exchange, again, forms another focus of the vast money transactions of our great home and colonial empire, as well as of the entire world, and the Bank of England close by it, is an establishment of no less importance.

There is another trade which has a distinct locality, although it has no market-buildings or exchange. I refer to the metal trade. The trade in iron, lead, and copper, and more recently in the heavier manufactured articles of metal, is chiefly carried on in Thames Street, from London Bridge to Blackfriars Bridge; but the leading merchants, brokers, and iron companies, congregate almost entirely in Laurence Pountney Hill and Laurence Pountney Place, and the parts of Cannon Street adjacent.

What may have been the cause of the selection of this particular locality, I do not clearly see, except that facility of water carriage and wharfage were essential.

There are also manufacturing centres, such as silk weaving in Spitalfields and Bethnal Green; the cabinet-making which is carried on in Old Street and its neighbourhood; the various articles of antiquity and vertu in Soho and the neighbourhood of Golden Square; the clock and watch trade in Clerkenwell; and so on.

Under the shadow of the cathedral church of St. Paul, on the south side of the way, were gathered the chambers of the proctors and doctors of ecclesiastical law; and here they still remain, although, recent legislation having greatly diminished their prerogative, their number has considerably decreased. The formation of Queen Victoria Street has changed the character of part of this neighbourhood,—a large number of houses in Great Carter Lane and Knight-rider Street, including the Arches and Admiralty Courts, having been destroyed to make way for the new street, and very many of the former inhabitants have migrated westward. In the same locality are the offices for procuring marriage licenses and the Registry of the Probate Office for the deposit and inspection of wills, to which an addition has been recently made by Sir JAMES PENNETHORNE. Here also, as has already been mentioned, are situated the Courts for determining all questions of ecclesiastical law, as well as Admiralty cases, claims for salvage, collisions, and so forth. This district is called Doctors' Commons, and comprises Great Knightrider Street, Carter Lane, Godliman Street, Bennet's Hill, Bell Yard, and numerous small streets.

Within my recollection, at the corner of nearly every street in this quiet, out-of-the-way district, stood ticket-porters, who touted for the custom of those amorous people who resorted hither for their marriage-licenses; and to this day, at a certain archway leading to Dean's Court, on the south side of St. Paul's Churchyard, may be seen one of

the last of this scandalous brotherhood, soliciting any passer-by who appears apt for a matrimonial affair.

Hard by, another branch of learning has been long fostered at the College of Heralds. This was formerly a secluded spot in the midst of one of the busiest parts of London, but it has been now quite opened by the formation of Queen Victoria Street.

On the north side of St. Paul's Churchyard were, and still are, the canons' houses and the great centre of the publishing trade,—the ecclesiastics having probably been, previous to the Reformation, nearly the only patrons of literature. Paternoster Row is still the centre of the book trade, and is known in the trade as "the Row;" and, directly dependent on this intellectual centre, is the Hall of the Stationers' Company, where, I believe, the publication of every book is recorded as "entered at Stationers' Hall." To the westward of the district last described are the chief printing establishments of London. The *Times* printing office is in a quiet nook, on the site of the King's printing office for Bibles and prayer books, under the shadow of St. Paul's on the south side; but most of the printing offices are situate along the line of Fleet Street, on its northern side. All the great printing offices, newspaper offices, and publishing offices are found here. They have extended themselves more and more to the westward until one of the latest established of the great newspapers, the *Pall Mall Gazette*, has located itself as far west as Northumberland Street, in the Strand. The great proportion of the establishments of this branch of industry do not, however, as a rule, extend much further westward than Drury Lane.

There is still another great centre to which I have not alluded, which, although not a commercial centre, and not strictly entering therefore into my subject, is yet of

considerable importance in the economy of a great city. This is the quarter of the lawyers, who occupy a very considerable area just beyond the City walls, extending from the river, northward, as far as Fleet Street, and thence along Chancery Lane and its neighbourhood to Lincoln's Inn, and beyond Holborn to Raymond's Buildings and King's Road, Gray's Inn Lane.

Their position is appropriate, between the City of Commerce, and Whitehall and Westminster, the ancient seats of Royalty and Government.

Within the City walls, that branch of the legal profession which may be called the "commercial" is found chiefly in the Old Jewry, Basinghall Street and Coleman Street, in the neighbourhood of the Guildhall and the Bankruptcy Court, where the last scenes of so many great mercantile houses have been closed.

On the south side of the river is the well-marked centre of the hop trade, in the Borough and New Southwark Street. Here came, in former days, the staple produce of Kent and Sussex—hops; and, until recently, farming seeds, which the growers took back in exchange for their hops. This latter part of the business has much decreased; but the Borough is still the hop market of South England. An attempt has been made, lately, to create a central market; but the trade is limited and jealous, and the open market has not succeeded.

Eastward of this is the wool market.

Bermondsey has been the seat of the leather market for the last two centuries. At the commencement of the period of which I am treating, the wool trade was chiefly confined to Bermondsey, where a wool market was built about the year 1830, and it is still the London market for English wool, but it has been considerably interfered with

of late years. The Australian wool, which now forms a considerable item, is brought to London by water, and is delivered at the Docks, and a large proportion of this trade is carried on in the eastern part of London.

Still further east, on the south side of the Thames, is the skin market. This locality was chosen for the business of the Skinners, which was of considerable importance in the middle ages, not only on account of its being the side of London nearest the greatest oak-growing county in England, viz., Sussex, but also because the supply of water from the Thames was most abundant and easily procured, this part of London being as much, in some places, as 10 feet below the Trinity high-water mark. The trade is still carried on here, as well as the cat-gut trade, but not to the same extent as formerly.

At the extreme eastern boundary of London, come the docks of the timber trade—the Commercial Docks, evidently a most convenient locality; but the chief stores for retail use are further up the river, in Lambeth.

Still on the south side, between London Bridge and Lambeth, on the site of the old domain of the Bishops of Winchester, some fragments of whose palace still exist near St. Saviour's Church, and where land was and still is comparatively cheap, were first the dyers' establishments, close to the river, on account of the facility for the water supply required. These have all ceased to exist. Next came the manufacturers of metals, copper smiths, white lead makers, founders, smiths, braziers, &c. These all still remain. Then came the chief coal wharves; these within a very few years were superseded, owing to the railway facilities for bringing coal to London, and lastly, as before referred to, came the depôts for timber. I well recollect beyond these, in Lambeth, the sheds and boats of the Thames fishermen, but these have long since gone.

I might easily extend these observations as to the markets and manufacturing districts of London, but what I wish more particularly to point out is the influence which these great centres have upon the value of property. To be in a market is, we all know, of great importance; it is something to be in London, itself one vast emporium and mart, but it is more still to be in the market itself. For this reason, the land in the great market of London—the money market—is the most valuable land in London, and perhaps the most valuable land in the world. What do we observe now in the hoarding round the new building, now erecting at the corner of Queen Victoria Street and the Poultry,—little boxes, where sellers are established in the vast line of traffic which passes this locality. What rent they pay I do not know; but I do not doubt it is something considerable for mere standing room in the midst of commercial London.

Something like £40 per superficial foot for the freehold is, I believe, the highest price obtained for land in this great centre, but this is an exceptional case, and probably about £30 may be stated as the average maximum value which ground has yet reached in the very heart of England's metropolis. This large value, however, extends over a very limited area. It comprises a part of Cornhill, but hardly extends beyond Finch Lane, to the eastward, or westward beyond the Liverpool and London, and Globe Insurance offices, at the corner of Lombard Street and Cornhill.

The highest quoted value of land in my experience was in Lombard Street; but, as before stated, I consider this quite exceptional. Lombard Street itself, in its best part, would not exceed two-thirds of the value of the land in Cornhill; whilst, at the eastern end of Cornhill, the land does not reach a value exceeding one-third of its maximum value opposite the Royal Exchange.

Taking, as I do, the Royal Exchange as the centre of the commerce of London, it is in this immediate neighbourhood that land reaches its maximum value. If we go either eastward or westward of the Royal Exchange, the value of land rapidly declines; eastward, at the end of Cornhill, it is already only worth about one-half (10s.) a foot what it is worth at the Royal Exchange. If we cross over Bishopsgate Street the value decreases to about one-fourth of the maximum (5s.), and when we get as far east as the Minories, the land there has almost reached its minimum value in the City of London.

In Bishopsgate Street Within, where are to be found the great commercial houses of Baring Brothers, Antony Gibbs, & Co., and one or two more large mercantile firms, the value of land is about intermediate between its value at the eastern end of Cornhill and the western end of Leadenhall Street.

Proceeding in another direction, along the line of Lombard Street, the land here retains its value more nearly through its entire length than it does in Cornhill and elsewhere. Lombard Street is in the line of thoroughfare to the great commercial centres of colonial trade, and with Fenchurch Street, may be taken at about one-third, or somewhat less, of the maximum value, falling to about one-fourth, or even one-fifth, as it approaches Mark Lane; beyond that point it passes the commercial centres and rapidly falls in value.

There are now two great lines of thoroughfare tending westward, one leading along Cheapside and Ludgate Hill to the Strand, and the other along New Queen Victoria Street to the Thames Embankment. On the former thoroughfare, about as far west as Bucklersbury, the traffic is the densest in London, as computed by Mr. WILLIAM HAYWOOD, the Engineer to the City Commissioners of Sewers, and referred

to in a masterly pamphlet drawn up by him, urging the necessity of opening up new thoroughfares in the City.

As far west as Bucklersbury, the land in the Poultry, especially on the south side of the street, attains very nearly its maximum value. A very recent letting, at the corner of New Queen Victoria Street, will attest this assertion. Beyond Bucklersbury, the price gradually falls. I have hardly any data precise enough to give an exact proportion, but I am, probably, safe in saying, that along the western part of Cheapside and, (as far as the western end goes,) of Ludgate Hill, that the land hardly realizes more than one-fourth of its maximum value. Along the Strand, as far as Charing Cross, about one-sixth is, probably, the per-centage, although, perhaps, this is rather low for corner situations.

If we take the new line of Queen Victoria Street, from the Mansion House to Blackfriars, there have already been sufficient dealings in the land bordering on the street, to prove that the value rapidly declines in proportion as we leave the great centres of value and commerce. The extreme eastern portion of the street fully maintains the maximum value; but it falls to about one-half a very short distance westward, and from one-fourth to one-fifth at the western end of the street.

If we follow the line of Cheapside in the direction of Holborn, the value of land still decreases as we go westward, until—notwithstanding the impetus given by the magnificent viaduct, which now blots out what was for long that great disgrace to London, the Holborn valley—the land hardly realizes one-fourth of the maximum value; although in one instance (a corner plot) it reaches about one-third.

Southward of the Royal Exchange, in the narrow lanes

which, until they were cut in two by the opening of King William Street in 1831, were very unimportant thoroughfares, the land reaches about one-third of its maximum price, until at the southern end of these lanes, next the river's bank, its value does not much exceed one-tenth of the maximum, and that only in the portions nearest to London Bridge, on the west.

Northward of the Royal Exchange, except immediately adjoining the Bank,—that is to say, in Bartholomew Lane, Throgmorton Street, Lothbury, and Tokenhouse Yard, which are in close proximity to the money market,—the land does not exceed about one-half of the highest value, and beyond that it rapidly falls, until, in Finsbury, it realizes not more than from one-fifteenth to one-twentieth of the full value.

In Bishopsgate Street Without the value falls rapidly, and in the small streets running westward out of Bishopsgate Street, such as Sun Street and Skinner Street, houses and shops were, until quite recently, when their value has been somewhat improved by the passage of the North London Railway, letting at rents almost as low as the most distant parts of London.

There has always been, and still exists, an almost unreasonable difference in the value of land on the south side of the river and that upon the north side. In the best thoroughfares, land on the south side of the Thames scarcely realizes one-fifteenth or one-sixteenth of the maximum value of City land, and when at only a moderate distance from the river, and, indeed, when close upon it, it hardly goes beyond one-fortieth of the maximum, viz., about 6*d.* a foot. Immediately adjoining, however, the south end of London Bridge the land changed ownership by the acre at something over the highest proportionate rate I have just

referred to, and in the line of New Southwark Street, in one favourable corner plot, it reached six-twentieths of the full value.

However, these statements of value, most of which are founded upon my own personal experience, I only offer to you as approximate. There must always be exceptional conditions, such as corner sites, aspect, light, convenience of access, suitability for special buildings, non-liability to interference by adjoining owners, and so on, as well as the pressing necessities and prodigality of some of the great houses of business requiring extension of accommodation, which considerably influence the value of property in certain localities.

Besides the great lines of thoroughfare I have referred to, converging towards the central point of importance and value, there are also, as I have endeavoured to point out, other centres or foci of value, which are scarcely less valuable than those I have already enumerated. For example, I have recently heard of land, in the centre of the Manchester trade or market, being valued as high as the land in close vicinity to the Royal Exchange.

It is curious to observe, however, within how short a distance the value of land varies; for instance, in Friday Street the maximum value of land is asked and obtained; but within a stone's throw of that spot,—in Monkwell Street, for instance,—its value falls to one-eighth of the maximum. And in the old City lanes intersected by King William Street, there is a very notable difference between the value of land on the north and on the south side of that thoroughfare.

The difference between the highest and the lowest value of land in the City may be stated as about 1 to 20; for I take 20*s.* a foot to be now about the maximum value, and

1s. a foot as about, although not quite, the minimum. I think I am right in saying that land let for residential purposes, in the most fashionable districts of western London, does not reach more than from one-sixth to one-eighth of the maximum value of land in the City proper.

We are all familiar with the vast differences in the value of property which have occurred in the course of the last half century. It would not, I think, be at all excessive to say that, in the localities comprised within the before-named markets, the value of land has at least doubled during the last fifty years, and that in the more important trade centres within the City of London it has fully quadrupled.

I have purposely refrained from alluding, by name, to any case; but one special instance occurs to me in illustration of my remarks. The Hanseatic towns had, from a very early period, a wharf in Upper Thames Street, near London Bridge, called the Steel Yard. Here, shut in within their own walls, they had their own mercantile centre and *dépôt* for goods, just as, I believe, is still the custom in Chinese cities. The piece of ground covered just 60,000 feet superficial. The Hamburgers, to whom ~~the~~ Steel Yard belonged, sold this ground, through their engineer, Mr. LINDLEY (who has done much to raise the town of Hamburg from the ruin in which it was plunged by the disastrous fire of 1842), for exactly £1 a foot, or just what I now take to be the *minimum* value of land in the City. This was not more than some twenty years ago, and a few years since it was sold for, I believe, £3 a foot. The site of the Steel Yard is now covered by Mr. HAWKSHAW'S City terminus of the South Eastern Railway.

I have no sufficient data with reference to the value of land in other great cities to which I can refer, so as to quote

figures, but I have a general impression that land in London has arrived at no excessive value as compared with such other localities, and that it is a value which, so long as we remain a commercial country, will be maintained, and even increased.

I can quote some instances of the value of land in PARIS. The land in the new street from the Place de l'Opera to the Rue de Rivoli, was *sold*, in 1869, at from £68 to £72 per square mètre for corner plots, or from £6 6s. to £7 per foot, taking 10 feet superficial to equal a mètre. On the Boulevards the land, however, only fetched, at the same time, £5 a foot; but these prices are, by no means, I believe, the highest prices for land which have been obtained in Paris.

In the centre of the city (*viz.*, round the Bourse), and upon the inner Boulevards, land realizes, if I recollect rightly, quite as much as, or more than, land in London.

At New York, I believe, the same condition of things prevails; and, two or three years ago, I was not a little surprised to find what a high price land realized at St. Petersburg, in the midst of the commercial centres of that great, but at the same time not very commercial, city.

When we reflect that, in the year 1811 our whole population did not exceed twenty millions, and that of London itself one and a-half millions, whilst at the present time the population of London probably reaches to nearly four millions and the population of the United Kingdom to something like thirty millions; and when we consider, moreover, that the amount of gold in circulation has very largely increased, especially since its discovery in Australia and California, and that wherever land remains the same in quantity, it is almost a natural consequence that it should rise in value, we need not feel surprised that land

in London, more especially in its great commercial centres, should have increased in the proportion which it has done.

The population of London is constantly reinforced by the influx of residents from provincial districts and foreign countries. Twenty years ago, the proportion of these residents in London, twenty years of age and upwards, was as 645,000 born in London to 750,000 born in the country or abroad.*

The Registrar-General in 1851 (just two decades ago), taking equal areas to obtain a fair comparison, found that the population of London had increased in the following ratios, viz. :—

In the year 1811 the population was 1,138,815			
„	1821	„	1,378,947
„	1831	„	1,654,994
„	1841	„	1,948,417
„	1851	„	2,362,236

that is, just one million in forty years ; and it is remarkable that the population of London in 1851 is very nearly the same as the estimated population of Imperial Rome, and about double the present population of Paris.

The natural increase of the population of the United Kingdom—that is, the excess of births as compared with the deaths for the three months ending March 31st, 1871, —was 95,426.

The Registrar-General calculated that, if the population increased in the ratio it had done between 1841-1851, it would reach six millions before the end of the present century ; and if it be true, as it is asserted, that the present

* Of foreigners in London, it is estimated that no less than six-sevenths, or upwards of 30,000, are natives of Germany or German provinces.

census will disclose that we have a total population of four millions in London alone, this calculation will probably be more than verified.

These facts have for us a very practical as well as a speculative bearing. The confined area within which business is transacted in the City, and the enormous increase in the population which is continually going on, must inevitably lead to the displacement of certain trade centres and a consequent variation in the values of property. Some of these changes may be already anticipated by a consideration of what has occurred in analogous cases; but it is, of course, impossible to foretell with any degree of accuracy in what direction the exodus will take place, and what may be the extent of the land which will be required to meet the wants of an ever-growing population.

Were it possible to forecast what will be the future centres of value, or to define what will become the great lines of traffic, we might, there is no doubt, make a very practical use of this knowledge. The very complex social system under which we live, the force of habit and a complacency which makes us satisfied with things as they are, renders it extremely difficult to effect changes or improvements, and the partial manner in which nearly all alterations are carried out, makes it almost impossible to predict, with any certainty, the effect of such alterations upon the value of land within the metropolitan area.

That some important changes are inevitable may be inferred from the extraordinary development that has taken place in some branches of trade, and on the other hand the almost total collapse of some of the most important industries upon which we formerly relied.

As an instance of the changes which affect us, may be mentioned our trade with the colony of Australia, which

has sprung up entirely during the present century, and has now assumed very remarkable proportions.

In the year 1860, the declared value of our exports to the colonies was nearly ten millions, and of our imports five-and-a-half millions ; while in 1868 the imports were £12,077,965, and the exports £18,066,687 ; and yet, with our extended commercial relations, and the great increase of our commerce, the trade centre of this enormous business remains nearly the same as in the beginning of the century. Some changes have however taken place, which have been important.

I may cite the removal of Smithfield Market from the middle of London, which caused considerable disturbance to business, affected the value of land to some extent, and caused, probably, some cases of individual hardship in consequence of the value of ground having declined for a time ; but the erection of the New Meat Market, and the alterations which have been effected in the neighbourhood, have once more raised the character of the site, and in all probability rents are now higher in Smithfield than they were before the removal of the market. The planting of the market at Islington has largely tended to the development of the property in the neighbourhood, and the preservation of a large unoccupied space is no doubt beneficial in a populous, overcrowded locality.

The transfer of the meat market from its ancient *habitat* in Newgate Street, to the handsome and commodious building in Smithfield which it now occupies, has also, to some extent, influenced the value of land in the former locality, but there can be little doubt that the area of the old market will be rapidly absorbed by other trades in the vicinity (probably by the bookselling trade), and that a proper equilibrium will be established.

The removal of public offices from the interior of the

City to the more western part of London has tended to relieve the plethora of population, which, at times, threatens to choke the City. The transference of the Government of India from the East India Company to the Crown in 1855, by the Act 21 & 22 Vict. c. 106, rendered the East India House in Leadenhall Street unnecessary, and its site became available for the erection of offices.

The Excise Office, in Old Broad Street, which was built on the site of Gresham College, in 1774, was, in the same manner, removed to Somerset House, on the incorporation of the Board of Excise with that of Stamps and Taxes in 1849, and the Old Excise Office was converted into offices and re-named Gresham House.

The South Sea House is another example of a somewhat similar transformation, a portion of the premises being occupied by the Oriental Banking Corporation, and the remainder by the Baltic Coffee House and sale rooms.

The Hudson's Bay Company's premises in Fenchurch Street, after having remained unlet for a considerable time, have been recently let, and converted into private business offices.

It has been lately proposed to remove the Royal Mint from its present position on Tower Hill, to some more convenient locality, and the Thames Embankment has been suggested as a fitting spot. This matter, however, is for the present in abeyance.

Whatever changes have occurred, or may supervene, in other departments of commerce, it is tolerably certain that the money market will always remain in the heart of the City, and there is, therefore, little reason to fear that the value of land in the neighbourhood of the Bank and the Royal Exchange will suffer any diminution. Cornhill, and the streets in its vicinity, must always be the centre of

London, and the centre of business activity, and it is not easy to imagine any alteration, short of a political cataclysm (hitherto happily unknown in this country), which could in any way deteriorate from its value. The recent removals of the capital of Italy from Turin to Florence, and from thence to Rome, as well as the possible abandonment of Paris, are, no doubt, suggestive facts, but I venture to think that, so far as we can form any opinion of future events, London will always remain the centre of imperial British commerce, and the City of London the focus of commercial activity.

In conclusion, I crave the indulgence of the Meeting in a matter on which so many of the Members must necessarily be already fully and better informed than myself; but I conceived that it might be useful to put together the results of an experience which has not been inconsiderable, in a succinct and general form, and to offer some comments on the subjects on which I have touched.

All the statements I have made with regard to comparative values are founded upon knowledge acquired in my own practice and experience, which (save within a very limited area) has not been, so varied or extensive as I am aware has been the practice and experience of many of you.

I have hardly felt at liberty to cite the particular data upon which I rely for the facts contained in my Paper to-night; but my chief object has been, not to state precise values in particular districts, but to point out the really intelligible causes which determine the value of land in certain localities, subject to special and constantly shifting circumstances, which, as you all well know, must be taken into consideration in every instance.

Mr. J. H. LLOYD (Associate of Council), in proposing a vote of thanks to Mr. I'ANSON, said that, in doing so, he was sure he should but echo the sentiments of all who had listened to his interesting and instructive Paper. He thought that Mr. I'ANSON had very properly abstained from quoting names or special instances, as such particularity might compromise parties hereafter. He did not think that any surveyor would feel himself justified in referring publicly to particular facts with which he might have become acquainted in his private practice. The selection of such a subject by Mr. I'ANSON was peculiarly appropriate, as it was well known that no Member of this Institution possessed a larger experience than he in dealing with land in the centre of the commercial districts of London.

Mr. E. J. SMITH, (Member), in seconding the vote of thanks, observed that Mr. I'ANSON had chosen a subject whereon he was more qualified, by knowledge and experience, to speak, than any other Member of the Institution. He would take the opportunity of remarking that the variation between the proportion in the value of the site of an edifice and of the full value of the edifice and site together, came out more distinctly in the cases which were the subject of Mr. I'ANSON's Paper than in any other form. In an ordinary building district in the country, it frequently happened that the interest on the cost of site constituted hardly one-tenth of the annual income of the site and buildings. He had been associated with Mr. I'ANSON in several cases, and he thought that gentleman would agree with him that cases frequently occurred in the City in which, if the interest on the cost of the edifice were taken at 6 per cent.—say the edifice cost £10,000, and that the interest was £600 per annum—the value of the edifice and the site together, when

the building was erected, would be £18,000. That was to say, the value of the site was two-thirds of the full value of the edifice as fit for occupation.

The vote of thanks having been carried unanimously, the Meeting adjourned.

THE ANNUAL GENERAL MEETING,

Monday, May 29th, 1871.

RICHARD HALL (PRESIDENT) IN THE CHAIR.

Messrs. ROBERT VIGERS and J. H. CLUTTON, having been requested to act as Scrutineers of the ballot for the Election of Council, the balloting list submitted by the Council in accordance with the bye-laws, and the record of attendance of the Members of Council, were read, and the ballot declared open.

The Report of the Council on the state of the Institution, and the Statement of Receipts and Expenditure for the year 1870, were read.

RESOLVED—"That the Report of the Council and the Balance Sheet be received and approved, and be printed and circulated with the 'Transactions.'"

RESOLVED—"That the thanks of the Institution be given to Messrs. CHARLES STEPHENSON and ARTHUR GARRARD for their efficient performance of their duties as Auditors, and that they be requested to continue their services for the ensuing year."

RESOLVED—"That the thanks of the Institution are due and be given to the President, the Vice-Presidents, and the other Members and Associates of Council for the able manner in which they have administered the affairs of the Institution."

RESOLVED—"That the thanks of the Institution be given to Mr. JOHN WORNHAM PENFOLD (the Honorary Secretary), to the Treasurer, and other Officers of the Institution, for the manner in which they have executed their several duties."

The ballot having been closed, the Scrutineers reported that the following gentlemen had been elected as Council for the ensuing year, viz. :—

President.

RICHARD HALL

Vice-Presidents.

JEREMIAH MATHEWS

THOMAS HUSKINSON

EDWARD NORTON CLIFTON

JOHN OAKLEY

Members of Council.

CHARLES FREDERICK ADAMS

THOMAS HORSEY

WILLIAM JAMES BEADEL

EDWARD RYDE

VIRGOE BUCKLAND

CHARLES JOHN SHOPPEE

FREDERICK JAMES CLARK

EDMUND JAMES SMITH

HENRY CRAWTER

WILLIAM STURGE

ROBERT COLLIER DRIVER

FRANCIS VIGERS

Associates of Council.

JOHN HORATIO LLOYD

FREDERICK JOSEPH BRAMWELL

RESOLVED—"That the thanks of the Meeting be given to Messrs. ROBERT VIGERS and J. H. CLUTTON, for their services as Scrutineers."

A vote of thanks to the President for his conduct in the Chair, having been passed unanimously, the Meeting separated.

THE THIRD
ANNUAL REPORT OF THE COUNCIL
TO THE
ANNUAL GENERAL MEETING, MAY 29TH, 1871.

THE Council have again to report the steady advance of the Institution, both in numbers and importance during the past year.

The Council record with satisfaction that the Honorable Charles Alexander Gore and the Honorable James Kenneth Howard, of the Office of Woods, Forests, and Land Revenue, and Lieutenant-Colonel George Archibald Leach, of the Tithe and Inclosure Commission Office, have been elected to the Honorary Membership of the Institution.

Since the date of the last Report 3 Honorary Members, 13 Members, and 8 Associates have been added to the Institution, which now numbers 3 Honorary Members, 189 Members, 65 Associates, and 2 Students.

Two Members, Mr. J. W. Hornblower (of Birmingham), and Mr. Frank Vigers (of 4, Frederick's Place), and one Associate, Mr. J. S. Ellis (of Nicholas Lane), have died during the past session.

The Council have adhered to their policy of confining the expenditure of the year strictly within the limits of the revenue derived from subscriptions, rent, and interest on investments, and are by these means enabled to report that a considerable increase has been made during the past year to the fund accruing from entrance fees and investments on capital account.

The balance sheet for the year ending December 31st, 1870, shows the following results:—

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Total Revenue . . .	983	6 3	Total Payments out of Revenue . . .	909	5 4
Revenue Balance in hand, January 1st, 1870	314	5 8	Revenue Balance in hand, January 1st, 1871	388	6 7
Entrance Fees, &c. carried to Capital Account	176	8 0	Payments out of Capital	5	5 0
Capital Balance in hand, January 1st, 1870	874	7 9	Capital Balance in hand, January 1st, 1871	1,045	10 9
	<u>£2,348</u>	<u>7 8</u>		<u>£2,348</u>	<u>7 8</u>

A summary of the receipts and expenditure for the present year, up to this date, is as follows:—

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Total Revenue . . .	814	8 7	Total payments out of Revenue . . .	499	7 6
Revenue Balance in hand, January 1st, 1871	388	6 7	Revenue Balance in hand, May 1871	703	7 8
Entrance Fees carried to Capital Account	66	4 0	Total payments out of Capital	12	10 0
Capital Balance in hand, January 1st, 1871	1,045	10 9	Capital Balance in hand, May 1871	1,099	4 9
	<u>£2,314</u>	<u>9 11</u>		<u>£2,314</u>	<u>9 11</u>

Of the balance on capital account £157 10s. (Life Compositions) is invested in the purchase of £168 18s. Consols, and £900 in the purchase of £966 17s. 10d. New 3 per Cents., leaving a cash balance of £41 14s. 9d.

Of the balance on revenue account, £300 is invested in the purchase of £321 8s. 6d. New 3 per Cents., leaving a cash balance of £403 7s. 8d.

The total liabilities at this date do not exceed £20.

During the past year a sum of £100 has been invested, on the Library Account, in the purchase of £110 19s. 2d. New 3 per Cents., leaving a balance in hand of £84 4s. 5½d. for the purchase, from time to time, of books and maps, as favourable opportunities present themselves. Many donations of money and of valuable books have been made during the past year; but there are still many works, lists of which are printed on the cover of the "Transactions," which might with great advantage be added to the library. It is hoped that Members may contribute these works, and thus spare the library fund a considerable outlay.

An opportunity having presented itself of purchasing the interest of the superior lessee in the premises occupied by the Institution, negotiations have been entered into with that object. The terms at present proposed on behalf of the vendor, are not, however, such as the Council feel justified in accepting.

As announced in the last Report, certificates of Membership have been prepared and issued to all the Members and Associates of the Institution.

Thirteen Ordinary General Meetings have been held

during the session. Some valuable papers have been contributed to the "Transactions" of the Institution, and several discussions of great interest and practical value have engaged the attention of Members.

Papers have been read, comprising the following subjects:—

The Opening Address, by RICHARD HALL, President.

Parochial Assessments (continued), by EDWARD RYDE.

The Valuation of Annuities and Reversions, dependent upon Terms of certain Duration, by WILLIAM MATHEWS, JUN.

A discussion on the *Proposal for making Owners liable to the Payment of a Proportion of the Local Taxation*, opened by EDMUND RUSHWORTH.

Results of the Land Purchases of the Tunbridge and Dartford Railways, by EDWARD RYDE.

Tithe and Tithe Commutation, by WILLIAM STURGE.

Tithes, by JOHN OAKLEY.

The Progress in Utilization of Sewage, as shown by Experience gained upon the Lodge Farm, Barking, by HENRY JAMES MORGAN.

A discussion on the *Rating and Local Government and Local Taxation Bills before Parliament*, opened by RICHARD HALL, President.

London ; its Commercial Centres, and their Influence on the Value of Land, by EDWARD P'ANSON.

It will be seen that the number and character of the Papers compare favourably with the previous years, and the Council have every reason to hope and believe that the Institution is now established upon a firm and lasting basis, and that its progress will be rapid and continuous.

Dr.

STATEMENT OF RECEIPTS AND EXPENDITURE

RECEIPTS.				REVENUE			
		£	s.	d.	£	s.	d.
1870.							
165 Members' Subscriptions for 1870, at £3 3s.	..	519	15	0			
4 New Members' Subscriptions, in advance,							
for 1871 at £3 3s.	..	12	12	0			
3 Members' Arrears for 1869	..	9	9	0			
					541	16	0
58 Associates' Subscriptions for 1870, at £2 2s.	..	121	16	0			
1 " Arrear for 1869	..	2	2	0			
1 Student's Subscription for 1870	..	1	1	0			
					124	19	0
Rent							666 15
Dividends, &c.							298 4
							18 7
Cash in hands of Treasurer and Secretary, December 31st, 1869					..		14 5

£997 11 1

CAPITAL

	£	s.
16 New Members' Entrance Fees for 1870, at £5 5s.	..	84 0
2 Members' Entrance Fees, Arrears for 1869, at £5 5s.	..	10 10
13 New Associates' Entrance Fees for 1870, at £3 3s.	..	40 19
3 Associates' Entrance Fees, Arrears for 1869, at £3 3s.	..	9 9
1 Member's Life Composition Fee ..	..	31 10
Balance in hands of Treasurer, December 31st, 1869	..	166 17

£343 5

LIBRARY

	£	s.
Donations 1870	..	70 2
Balance in hands of Treasurer, December 31st, 1869	..	275 4

£345 6

SUM

	£	s.
Revenue Account	..	997 11
Capital	..	343 5
Library	..	345 6

£1686 4

ASSETS AND

	£	s.
Cash in hands of Treasurer and Secretary	..	384 11
Value of Furniture	..	168 0
Arrears of Dividends	..	17 8
One Quarter's Rent, Ground Floor Offices, due	..	30 0
" " Second Floor Offices, due	..	33 6
" " Stables, due	..	11 5
Investments	..	1257 10

£1902 0

SURVEYORS.

FOR THE YEAR ENDING DECEMBER 31st, 1870.

Cr.

ACCOUNT.

EXPENDITURE.							
1870.						£	s. d.
rent	..	..	..	..	..	349	4 3
Insurance	..	..	..	..	..	2	15 6
Rates and Taxes	..	..	..	..	..	89	0 0
Fuel, Light, and Water	..	..	..	..	..	24	0 10
Stationery, Postage, and Receipt Stamps, Books of Account, Certificates, &c.	..	..	..	..	..	465	0 7
Publications, Parliamentary Papers, and Binding	..	..	..	..	..	42	19 5
Salaries and Wages	..	..	..	..	..	5	14 0
Tea and Coffee at Meetings	..	..	..	..	..	205	17 9
Household Effects	..	..	..	..	..	7	14 1
Housekeeper's Petty Cash	..	..	..	..	..	2	18 7
Publication of "Transactions"—Printing	..	..	..	..	..	5	18 9
Reporting	..	..	..	..	..	140	11 8
						27	16 6
Less Sale of ditto	..	..	..	..	..	168	8 2
						29	4 0
General Printing	..	..	..	..	..	139	4 2
						33	18 0
Cash in hands of Secretary	..	..	..	..	..	909	5 4
" " Treasurer	..	..	..	..	..	20	0 0
						68	6 7
						88	6 7
						£997	11 11

ACCOUNT.

						£	s. d.
Furniture	..	..	..	..	..	5	5 0
Invested in New 3 per Cents.	..	..	..	..	..	250	0 0
Cash in hands of Treasurer	..	..	..	..	..	88	0 9
						£343	5 9

FUND.

						£	s. d.
Purchase of Books, Maps, &c.	..	..	..	..	..	137	2 8
Cash in hands of Treasurer	..	..	..	..	..	208	4 1
						£345	6 9

REVENUE.

						£	s. d.
Revenue	..	..	..	..	..	909	5 4
Capital	..	..	..	..	..	5	5 0
Library	..	..	..	..	..	137	2 8
Invested	..	..	..	..	..	250	0 0
Cash in hands of Treasurer and Secretary	..	..	..	..	..	384	11 5
						£1686	4 5

LIABILITIES.

						£	s. d.
One Quarter's Rent of 12, Great George Street, to December 25th	..	..	..	..	..	87	10 0
Salaries, Sundry Accounts, Rates and Taxes	..	..	..	..	..	60	0 0
Balance	..	..	..	..	..	1754	10 5

Examined, with the Books and Vouchers, and found correct, May 29th, 1871.

CHAS. STEPHENSON, } Auditors.

ARTHUR GARRARD, }

£1902 0 5

DONATIONS OF BOOKS, MAPS, &c.

DONORS.	TITLE OF WORK.
<i>Architect</i> , Editor of the .	"The Architect," 1871.
Arding, C. B.	"The History of Leicestershire." By J. Throsby. 2 vols. 1790.
Baily, C.	"Remarks on Timber Houses." By C. Baily. 1869.
Bond, E.	"History of the County of Durham. By W. Hutchinson. 3 vols. 1823.
Brown, W.	"Journal of the Royal Agricultural Society." (Several parts.)
<i>Builder</i> , Editor of the .	"The Builder," 1871.
<i>Building News</i> , Editor of the	} "The Building News," 1871.
Carpenter, A.	
	{ A Pamphlet on the "Physiological and Medical Aspects of Sewage Irrigation." By A. Carpenter, M.D. 1869.
Denison, Sir W. T. . . .	Two Lectures on "Colonization." By Sir W. T. Denison. 1870.
Denton, J. Bailey . . .	{ Pamphlet on "Village Sanitary Economy and Sewage Utilization." By J. B. Denton. 1870.
Driver, R. C.	
	"English Life Tables." By W. Farr, M.D. 1864.
Eiloart, F. G.	"History of the City of Bristol." By J. Corry. 2 vols.
"	"History of London." By H. Chamberlain.
"	"History of London." By W. Harrison.
<i>Estate Exchange</i> , The .	"Index to the Estate Exchange Registers." 1871.

- Hope, W. A Lecture on "Sewage Irrigation." 1871.
- Institution of Civil En- } "Minutes of Proceedings." 2 vols. Session
gineers. } 1869-70.
- " "Report on the Education and Status of Civil
Engineers, at home and abroad."
- " "Supplement to the Library Catalogue of the
Institution of Civil Engineers."
- Institution of Mechanical } "Proceedings." 1870-71.
Engineers }
- Kernock, E. "History of Dorsetshire." By J. Hutchinson.
2 vols. 1774.
- Leach, Lieut-Col. G. A. . . "H.C. Return on Tithes commuted under
the Local Inclosure Acts." 1836.
- " "H.C. Return on Tithes commuted under
the Tithe Commission." 1848.
- London and Middlesex } "Proceedings of the London and Middlesex
Archæological Society. } Archæological Society." Vols. 1, 2, & 3.
1860-64-70.
- " "A Description of the Roman Tessellated
Pavement found in Bucklersbury, with
Plan of Pavement attached. 1870."
- Morgan, H. J. "Report on Sewage Irrigation at the Lodge
Farm, Barking." By H. J. Morgan.
1870.
- Morris, T. "A House for the Suburbs." 1870. }
" "British Carpentry and Gothic }
Roofs." 1871. } By
" "Clue to Railway and other Com- } T. Morris.
pensation." 1870. }
" "Outline of Perspective." 1869. }
- Morton, J. C. "Reports (England and Scotland) to the
Board of Agriculture." 66 vols.
- " "The Farmer's Magazine." 29 vols.
- Rogers, A. "The Law of Mines, Minerals, and Quarries."
By A. Rogers. 1864.
- Rushworth, E. Manual of "The Valuation (Metropolis) Act."
By D. P. Fry. 1869.
- Shoppee, C. J. "The Surveyor's Dialogue." Anon. 1738.
- " "Bibliotheca Massoviana sive Catalogus
variorum Librorum." By E. Millington.
1687.

- Smith, C. J. "History and Antiquities of North Durham."
By J. Raine. Folio. 1852.
- The British Association . "Report of the Committee of the British
Association, on the Treatment and Utili-
zation of Sewage." 1871.
- The Royal Institution of }
British Architects . . . } "Sessional Papers." 1870-71.
- Williams, R. P. . . . Pamphlet on "The Maintenance and
Renewal of Railway Rolling Stock." By
R. P. Williams.
- Williams, S. W. . . . "Maps of Canals and Navigable Rivers in
the Southern Counties." By G. Bradshaw.

INSTITUTION OF SURVEYORS.

List of Members, May 31st, 1871, with Council for Session
1871-72.

Honorary Members.

GORE, CHARLES ALEXANDER, The	
HONORABLE	Office of Woods, &c., 1, Whitehall Place.
HOWARD, JAMES KENNETH, The	
HONORABLE	Office of Woods, &c., 1, Whitehall Place.
LEACH, GEORGE ARCHIBALD, }	Tithe and Inclosure Commission Office, St. James's Square.
LIEUT.-COLONEL }	

Members.

ABBOTT, THOMAS	22, Savile Row, W.
ADAMS, CHARLES FREDERICK	Barkway, Herts.
(Member of Council)	
APPLEBY, GEORGE HABIN	Fareham, Hants.
ARDING, CHARLES BENNETT	23, Bedford Row, W.C.
ARNOLD, GEORGE	Dolton, North Devon
BARRY, CHARLES	1, Westminster Chambers, Victoria Street, S.W.
BEADEL, FREDERICK	25, Gresham Street, E.C.
BEADEL, WILLIAM JAMES	25, Gresham Street, E.C.
(Member of Council)	
BEAUMONT, GEORGE, JUN.	East Bridgford, near Nottingham.
BIDWELL, CHARLES	Ely, Cambridgeshire.
BIDWELL, CHARLES MURIEL	Ely, Cambridgeshire.
BINNIE, THOMAS	1, Nicholson Street, Glasgow.
BIRD, JAMES BINFIELD	West Cowes, Isle of Wight.
BLACKADDER, ROBERT	Dundee, Forfarshire.
BLOUNT, WILLIAM	Orchehill House, Gerard's Cross, Bucks.
BOND, ERASMUS	23, Bedford Row, W.C.
BONNY, JAMES RIPPOTH	43, Camden Road, N.W.
BOWLER, WILLIAM ANTHONY	7, Whitehall Place, S.W.
BRADLEY, CHRISTOPHER LONSDALE	Richmond, Yorkshire.
BRAVENDER, JOHN	Cirencester, Gloucestershire.
BROADBRIDGE, JAMES	12, Addison Terrace, Kensington, W.
BROWN, GEORGE	Roborough House, Barnstaple, Devonshire.
BROWN, THOMAS FORSTER	Guildhall Chambers, Cardiff.
BROWN, WILLIAM	Tring, Herts.
BUCHAN, THOMAS	24, Bank Street, Dundee.

MEMBERS.

BUCK, ALBERT	Worcester.
BUCKLAND, VIRGOE	72, Cannon Street, E.C.
<i>(Member of Council)</i>	
BURNELL, EDWARD HENRY	32, Bedford Row, W.C.
CADLE, CLEMENT	{ Clarence Street, Gloucester, and 52, Chancery Lane, W.C.
CATES, ARTHUR	7, Whitehall Yard, S.W.
CHANCELLOR, FREDERIC	{ Chelmsford, Essex, and Pinner's Hall, Old Broad Street.
CHAPMAN, GEORGE	14, Cockspur Street, S.W.
CHAPMAN, THOMAS	14, Cockspur Street, S.W.
CHINNOCK, FREDERICK GEORGE	11, Waterloo Place, S.W.
CLARK, FREDERICK JAMES	5, Lancaster Place, W.C.
<i>(Member of Council)</i>	
CLARKE, THOMAS CHATFIELD	63, Bishopsgate Street Within, E.C.
CLAYDEN, JOHN CARTER	Barnet, Herts,
CLIFTON, EDWARD NORTON	7, East India Avenue, E.C.
<i>(Vice-President)</i>	
CLUTTON, HENRY	9, Whitehall Place, S.W.
CLUTTON, JOHN	9, Whitehall Place, S.W.
<i>(Past President)</i>	
CLUTTON, ROBERT	Hartwood, Reigate, Surrey.
CLUTTON, ROBERT GEORGE	9, Whitehall Place, S.W.
CLUTTON, WILLIAM JAMES	The Mount, York.
COBB, ROBERT LAKE	Higham, Kent.
COLLIER, JOHN	Salters' Hall, St. Swithin's Lane, E.C.
COLLINS, HENRY HYMAN	5, Queen Street, E.C.
COMELY, JOHN GILL	Winchester, Hants.
COOKE, CHARLES HENRY	11, John Street, Bedford Row, W.C.
CRAWTER, HENRY	5, Bedford Row, W.C.
<i>(Member of Council)</i>	
CRAWTER, JOHN	Cheshunt, Herts.
CRICKMAY, GEORGE RACKSTROW	St. Thomas Street, Weymouth.
CULSHAW, WILLIAM	Rumford Court, Liverpool.
CURREY, HENRY	37, Norfolk Street, W.C.
DAVID, EDWARD	Llandaff, Glamorganshire.
DAVIDS, CHARLES HENRY	Banbury, Oxfordshire.
DENT, JOHN	34, Great James Street, W.C.
DENTON, JOHN BAILEY	22, Whitehall Place, S.W.
DOWNES, HENRY	Basingstoke, Hants.
DRIVER, ROBERT COLLIER	4, Whitehall, S.W.
<i>(Member of Council)</i>	
DUNLOP, ALEXANDER MILNE	1, Westminster Chambers, Victoria Street, S.W.
DURRANT, EDWIN ELMER	King's Lynn, Norfolk.
DYMOND, FRANCIS WILLIAMS	Exeter,

MEMBERS.

EASTON, WILLIAM	6, Hammet Street, Taunton, Somersetshire.
EILOART, FERDINAND GOZNA	40, Chancery Lane, W.C.
ELLIS, JOHN	Artington, Guildford, Surrey.
EVE, WILLIAM	10, Union Court, Old Broad Street, E.C.
FELTON, GEORGE	Llandudno, Carnarvon.
FIELD, FRANCIS	Oxford.
FISHER, ROWLAND GEORGE	17, Great George Street, Westminster, S.W.
FULLER, FRANCIS	3, Whitehall Gardens, S.W.
GALSWORTHY, FREDERICK THOMAS	11, Waterloo Place, S.W.
GARDINER, WILLIAM JAMES	110, Great Russell Street, W.C.
GIRDWOOD, JAMES	49, Pall Mall, S.W.
HALL, RICHARD	37, Great George Street, S.W.
<i>(President)</i>	
HALL, RICHARD, JUN.	37, Great George Street, S.W.
HALL, ROBERT WRIGHT	37, Great George Street, S.W.
HART, WILLIAM FREDERICK	16A, King's Road, Bedford Row, W.C.
HARVEY, JOHN	6, Victoria Place, Haverfordwest, Pembrokeshire.
HARVEY, RICHARD HART	6, Victoria Place, Haverfordwest, Pembrokeshire.
HAYWOOD, WILLIAM	Guildhall, London, E.C.
HEDLEY, THOMAS FENWICK	Sunderland.
HILLIARD, GEORGE BRIDGE	Chelmsford, Essex.
HIPPISLEY, EDWIN	Chamberlain Street, Wells, Somersetshire.
HORNBLOWER, JOHN LEWIS	16, Montpelier Road, Brighton.
HORSEY, THOMAS	11, Billiter Square, E.C.
<i>(Member of Council)</i>	
HORSFALL, RICHARD	Halifax, Yorkshire.
HORWOOD, JAMES	10, Paternoster Row, E.C.
HOWELL, CHARLES HENRY	3, Lancaster Place, W.C.
HUDSON, WILLIAM	19, Bennet's Hill, E.C.
HUMBERT, CHARLES F.	Watford, Herts.
HUMPHREYS, CHARLES, JUN.	61, Leadenhall Street, E.C.
HUNT, HENRY ARTHUR	4, Parliament Street, Westminster, S.W.
HUNT, JOSIAH	11, Park Street, Westminster, S.W.
HUSKINSON, THOMAS	Epperstone, Southwell, Notts.
<i>(Vice-President)</i>	
HUSSEY, GEORGE HENRY	The Green, High Wycombe, Bucks.
I'ANSON, EDWARD	7A, Laurence Pountney Hill, E.C.
INNES, JAMES	Wroxton, Banbury, Oxfordshire.
JACKSON, FREDERICK	Nottingham.
JONAS, JOHN CARTER	27, Market Hill, Cambridge.

MEMBERS.

KERMOCK, EDWIN	Kingston-upon-Thames.
KING, WILLIAM DAVID	Woodcrofts, North End, Portsmouth.
KNOLLYS, JAMES EDWARD	Fitzhead Court, Taunton, Somerset.
KNOWLES, WILLIAM	Albion Chambers, King Street, Gloucester.
LAMBERT, WILLIAM	4, New Basinghall Street, E.C.
LAURANCE, JOHN, JUN.	Warmington, near Oundle, Northants.
LAVENDER, JOSEPH	26, Bedford Row, W.C.
LEE, CHARLES	3, Whitehall Place, S.W.
LEES, JOHN	Reigate, Surrey.
LOVEJOY, WILLIAM	55, Chancery Lane, W.C.
LYE, JOHN GAUNT	8, Lancaster Place, W.C.
MACAULAY, COLIN ALEXANDER	Leicester.
MANN, CHARLES JOHN	21, Parliament Street, S.W.
MARR, JAMES	8, Adam Street, Adelphi, W.C.
MARRABLE, FREDERICK	21, Whitehall Place, S.W.
MARSH, HENRY EDMUND	54, Cannon Street, E.C.
MARTIN, JAMES	Wainfleet, Boston, Lincolnshire.
MARTIN, SAMUEL DICKINSON	1, Park Place, Leeds, Yorkshire.
MATHEWS, JEREMIAH	15, Waterloo Street, Birmingham.
<i>(Vice-President)</i>	
MATHEWS, WILLIAM, JUN.	15, Waterloo Street, Birmingham.
MENZIES, WILLIAM	Parkside, Staines, Middlesex.
MURTON, WILLIAM	Tunstall, Sittingbourne, Kent.
NEALE, CHARLES JAMES	High Oakham, Mansfield, Notts.
NORMAN, WILLIAM	8, Spring Gardens, S.W.
NORTH, GEORGE	22, Whitehall Place, S.W.
NOTLEY, RICHARD ALBERT	27, Royal Exchange, E.C.
OAKLEY, JOHN	10, Waterloo Place, S.W.
<i>(Vice-President)</i>	
OAKLEY, CHRISTOPHER	10, Waterloo Place, S.W.
OWEN, THOMAS RULE	High Street, Haverfordwest, Pembrokeshire.
PAXTON, JONAS	Bicester.
PENFOLD, JOHN WORNHAM	17, Parliament Street, Westminster, S.W.
<i>(Honorary Secretary)</i>	
POUNDLEY, JOHN EDWARD	Black Hall, Kerry, Montgomeryshire.
PRICKETT, GEORGE	62, Chancery Lane, W.C.
RAWLENCE, GEORGE	Salisbury, Wilts.
RAWLENCE, JAMES	Salisbury, Wilts.
RAYNBIRD, HUGH EDWARD	Basingstoke, Hants.
RIGDEN, RICHARD HENRY	The Close, Salisbury, Wilts.

MEMBERS.

ROBERTS, RICHARD	25, Laurence Pountney Lane, E.C.
ROBINS, EDWARD COOKWORTHY .	16, Southampton Street Strand, W.C.
ROSSER, WILLIAM	Llanelly, Carmarthen.
RUSHWORTH, EDMUND	22, Savile Row, W.
RYDE, EDWARD	17, Parliament Street, Westminster, S.W.
<i>(Member of Council)</i>	
SAUNDERS, CECIL GEORGE . . .	21, Parliament Street, S.W.
SAUNDERS, EDWARD	10, Bridge Street, Westminster, S.W.
SAVILL, ALFRED	3, St. Helen's Place, E.C.; and Chigwell, Essex.
SCOTT, THOMAS COLVILLE . .	19, King's Arms Yard, E.C.
SEDGWICK, ALFRED OTHWAITE .	Watford, Herts.
SHOPPEE, CHARLES JOHN . . .	61, Doughty Street, W.C.
<i>(Member of Council)</i>	
SMELLIE, THOMAS DAVIES . . .	209, St. Vincent Street, Glasgow.
SMITH, CHARLES BOVILL	Wickham, Hants.
SMITH, CHARLES JOHN	10, Waterloo Place, S.W.
SMITH, EDMUND JAMES	16, Whitehall Place, S.W.
<i>(Member of Council)</i>	
SNOOKE, WILLIAM	6, Duke Street, London Bridge, S.E.
SOUTHWELL, CHARLES JOSIAH .	9, Whitehall Place, S.W.
SPACKMAN, HENRY	6, Terrace Walks, Bath.
SQUAREY, ELIAS PITTS	Odstock, Salisbury, & 22, Great George Street, S.W.
ST. QUINTIN, PERRY. . . .	27, Royal Exchange, E.C.
STANLEY, HENRY	Bury St. Edmund's, Suffolk; & 2, Walbrook, E.C.
STATTER, THOMAS	{ Knowsley, Prescott; and Standhill, Whitefield, Manchester.
STEPHENSON, CHARLES	4, Parliament Street, Westminster, S.W.
STEWART, HERBERT THOMAS .	3, Victoria Street, S.W.
STURGE, ROBERT FOWLER . . .	34, Corn Street, Bristol.
STURGE, WILLIAM	34, Corn Street, Bristol.
<i>(Member of Council)</i>	
THOMAS, JOHN EDMUND	{ Hay, Breconshire, and 18, Abingdon Street, Westminster, S.W.
THYNNE, EDWARD LEWIS . . .	11, Great George Street, S.W.
THYNNE, FREDERICK GEORGE .	11, Great George Street, S.W.
TONER, JOHN	4, Gray's Inn Square, W.C.
TRIST, GEORGE	62, Old Broad Street, E.C.
TRUMPER, RICHARD	23, Lincoln's Inn Fields, W.C.
TUCKETT, PHILIP DEBELL . . .	10A, Old Broad Street, E.C.
TURNER, WILLIAM	Ipswich, Suffolk.
VIGERS, FRANCIS	4, Frederick's Place, E.C.
<i>(Member of Council)</i>	
VIGERS, ROBERT	4, Frederick's Place, E.C.

MEMBERS.—ASSOCIATES.

WALLEN, JOHN	1, Bishopsgate Street Without, E.C.
WARING, THOMAS	St. Mary Street, Cardiff.
WATKINS, ROBERT	16, Whitehall Place, S.W.
WATNEY, DANIEL	62, Old Broad Street, E.C.
WEBB, GEORGE	Tunstall, Sittingbourne, Kent.
WESTBURY, GILES	Andover, Hants, & 44, Lincoln's Inn Fields, W.C.
WHEELER, THOMAS	8, Lancaster Place, W.C.
WHICHCORD, JOHN	16, Walbrook, E.C.
WILLIAMS, GEORGE BARNES	Frederick's Place, E.C.
WILLIAMS, STEPHEN WILLIAM	Rhayader, Radnorshire.
WILLMOT, FRANCIS	33, Waterloo Street, Birmingham.
WILSON, ANDREW	7, East India Avenue, E.C.
WITHALL, RICHARD AUGUSTUS	4, Westminster Chambers, Victoria Street, S.W.
WOOD, FREDERICK	Albert House, Rugby, Warwickshire.
WOOD, WILLIAM BRYAN	Chippenham, Wilts.
WOODHOUSE, JOHN THOMAS	Overseal, Ashby-de-la-Zouch, Leicestershire.
WOOLLEY, THOMAS SMITH	South Collingham, Newark, Notts.

Associates.

BADCOCK, PHILIP	{ 9, Whitehall Place, and 4, Aldridge Road, West- bourne Park, W.
BARRY, JOHN WOLFE	17, Parliament Street, Westminster, S.W.
BEAUCHAMP, CHARLES DAVIE	9, Whitehall Place, S.W.
BIDDER, GEORGE PARKER, JUN.	3, Paper Buildings, Temple.
BRAMWELL, FREDERICK JOSEPH	37, Great George Street, Westminster, S.W.
<i>(Associate of Council)</i>	
BUTLER, ARTHUR	7, Staple Inn, W.C.
CARDALL, FREDERIC WILLIAM	9, Whitehall Place, S.W.
CARLISLE, WILLIAM THOMAS	8, New Square, Lincoln's Inn, W.C.
CARRITT, ERNEST	16, Basinghall Street, E.C.
CASTLE, EDWARD JAMES	4, Brick Court, Temple.
CATLING, ROBERT CHARLES	Needham Hall, Elm, Cambridgeshire.
CLUTTON, JOHN HENRY	9, Whitehall Place, S.W.
CLUTTON, RALPH	9, Whitehall Place, S.W.
CLUTTON, RALPH WILLIAM	Hartswood, Reigate.
COXWELL, JOHN EDWARD	32, Walbrook, E.C.
CRAWLEY, WILLIAM JEEVES	{ 10, Waterloo Place, Pall Mall, & 64, Belgrave Road, S.W.
DAVISON, THOMAS JOHN ROBERT	Bedford Office, Montague Street, W.C.
DEAN, HENRY	Southam, Rugby, Warwickshire.
DODGSON, WILFRED LONGLEY	16, Whitehall Place.
DOWDEN, HENRY JOSEPH	4, Whitehall, S.W.

ASSOCIATES.

EASTON, EDWARD	23, Duke Street, Westminster, S.W.
ELWIN, GEORGE HARVEY . . .	{ London and South Western Railway Terminus, Waterloo Road, & 3, Vine Terrace, York-rd., S.E.
FAWCETT, JAMES POGUE . . .	5, Lancaster Place, W.C.
FOWLER, JOHN	2, Queen Square Place, S.W.
FRASER, ALEXANDER	32, Brook Street, Hanover Square, W.
GARRARD, ARTHUR	17, Finsbury Square, E.C.
GRANTHAM, RICHARD BOXALL .	22, Whitehall Place, S.W.
HERRTAGE, SIDNEY JOHN HERVON	Surbiton, Surrey.
HOLLWAY JOHN GEORGE . . .	Lamb Building, Temple, W.C.
HOPE, WILLIAM	Parsloes, Barking, Essex, and 8, Finch Lane, E.C.
HORSLEY, RICHARD	Gresham Buildings, Basinghall Street, E.C.
HUBBERSTY, HENRY ALFRED . .	Buxton, Derbyshire.
JOHNSON, THOMAS MARR . . .	22, Great George Street, Westminster, S.W.
JOHNSTON, ANDREW	25, Gresham Street, E.C.
JONAS, HENRY	4, Whitehall, S.W.
KEELE, EDWARD RUSHWORTH .	5, Frederick's Place, Old Jewry, E.C.
LEE, CHARLES WILLIAMS . . .	3, Whitehall Place, S.W.
LLOYD, JOHN HORATIO . . .	{ 100, Lancaster Gate, W., and King's Bench Walk, (Associate of Council) Temple.
LOTT, JOSEPH	12, Great George Street, S.W.
NASH, ALFRED JAMES. . . .	Farnham, Surrey.
PETRE, HON. HENRY WILLIAM .	Springfield, Chelmsford, Essex.
PHILBRICK, FREDERICK ADOLPHUS	Lamb Building, Temple.
QUICK, JOSEPH, JUN.	Sumner Street, Southwark, S.E.
REES, JOHN CHARLES	29, Great George Street, S.W.
REX, WILLIAM	11, Waterloo Place, S.W.
ROGERS, ARUNDEL	2, Paper Buildings, Temple.
SHIELD, HUGH.	3, King's Bench Walk, Temple.
SMALLPIECE, GEORGE MOLINEUX	9, Whitehall Place, S.W.
SMITH, CHARLES JOHN	Darlington, Durham.
SMITH, HERBERT EDMUND . . .	16, Whitehall Place, S.W.
SMITH, WILLIAM BINNS	7, New Square, W.C.
SMYTH, EDWARD	9, Whitehall Place, S.W.

ASSOCIATES.—STUDENTS.

TATHAM, GEORGE HENRY	7, Whitehall Place, S.W.
TAYLOR, GEORGE	{ Tithe and Inclosure Commission Office, St. James's Square.
THOMPSON, CHARLES WILLIAM	
TOLMÉ, JULIAN HORN	17, Parliament Street, S.W.
TOLMÉ, JULIAN HORN	1, Victoria Street, Westminster, S.W.
TROLLOPE, GEORGE FRANCIS	15, Parliament Street, Westminster, S.W.
VULLIAMY, HENRY	10, City Road, Finsbury Square, E.C.
WARNER, WILLIAM HENRY	99, Mount Street, Grosvenor Square, W.
WHITE, FREDERICK MEADOWS	4, Paper Buildings, Temple.
WIGRAM, JOHN	South Collingham, Newark, Notts.
WILLIAMS, RICHARD PRICE	9, Great George Street, S.W.
WILSON, WILLIAM	4, Victoria Street, S.W.
WING, THOMAS TWINING	Bedford.

Students.

BUSHEY, GEORGE, JUN.	Lewes, Sussex.
RUSHWORTH, EDMUND WALTER	22, Savile Row, W.







